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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES AND THERMOSTATS				HEATERS			
A.	4W Standard	Fan Assembly	(1)	E.	Heater, Ambient		
	0392457	Fan Motor, Evaporator (120V) (MO.4410101)			0460453	120V (HE.4850579)	(5)
	0409511	Fan Blade (120V) (FB.0409511) embossing toward motor			0461866	230V (HE.4850646)	(6)
	4W Energy Efficient	Fan Assembly	(1)	LAMPS AND BALLASTS			
	0477653	Fan Motor, Evaporator (120V) (MO.4410544)		F.	Ballast, Electronic		
	0409511	Fan Blade (120V) (FB.0409511) embossing toward motor			0355716	2 lamps (120V) (BA.0355716)	(7)
	4W Export	Fan Assembly	(1)		0355398	3 lamps (120V) (BA.4480118)	(8)
	0436517	Fan Motor, Evaporator (230V) (MO.4410105)			0440215	2 lamps (230V 50-60 Hz) (BA.4481267)	(7)
	0409512	Fan Blade (230V) (FB.0409512) embossing toward motor			0428652	3 lamps (230V 50-60 Hz) (BA.4480897)	(8)
B.	15W Ambient	Fan Assembly			0385104	Ballast Transformer (230V 50-60 Hz, per ballast) (TR.4481191)	
	0404551	120V (MO.0404551)	(2)	G.	Fluorescent Lamp		(9)
	0404552	230V (MO.4410590)			<i>Replace with like fixtures</i>		
C.	0382028	Standard Non-adjustable Defrost Thermostat (CT.0382028)	(3)				
D.	0353949	Optional Adjustable Refrigeration Thermostat (CT.4481087)	(4)				

Note: Rev B. adds energy efficient fans; updates Btu note on page 3, electrical on page 4.

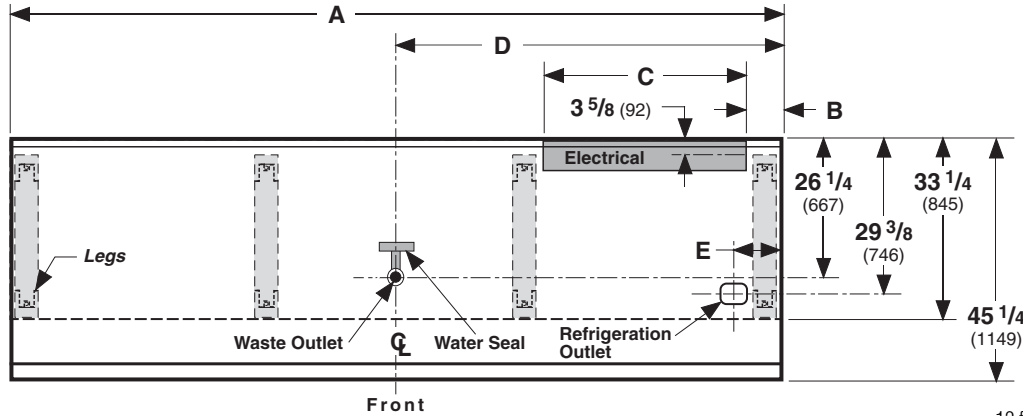
Engineering Plan Views

PHYSICAL DATA





Merchandiser Drip Pipe (in.)	1 1/2
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	7/8

Service Meat & Delicatessen

Dimensions shown as in. and (mm).

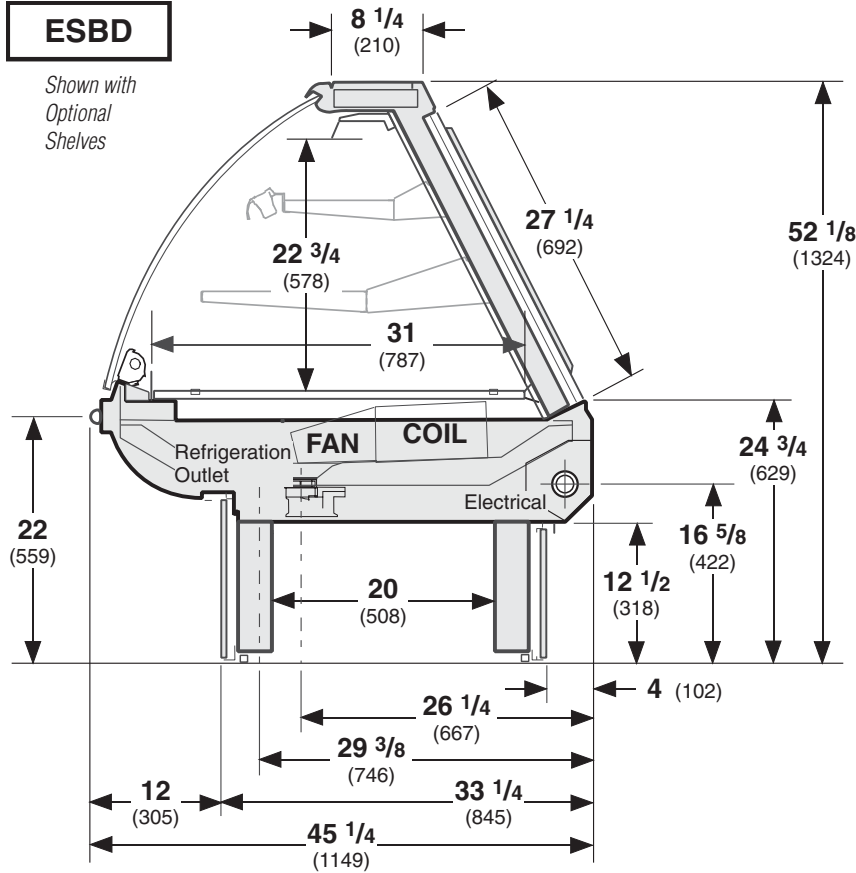


12 ft plan view is shown.

	4 ft	6 ft	8 ft	12 ft
General				
(A) Case Length <i>(without ends or partitions)</i>	48 1/4 (1226)	72 3/8 (1838)	96 3/8 (2448)	144 1/2 (3670)
<i>(Each end and insulated partition adds 1 in. (25 mm) to case line up.)</i>				
Maximum O/S dimension back to front <i>(with bumper)</i>	45 1/4 (1149)	45 1/4 (1149)	45 1/4 (1149)	45 1/4 (1149)
Back of case to front of front panel	33 1/4 (845)	33 1/4 (845)	33 1/4 (845)	33 1/4 (845)
RH end of case to outside edge of external support	1 5/8 (41)	1 5/8 (41)	1 5/8 (41)	1 5/8 (41)
Distance between edges of external support and center support	NA	28 1/2 (724)	40 5/8 (1032)	40 5/8 (1032)
Distance between edges of center supports	NA	NA	NA	44 (1118)
Distance between edges of external supports	37 (940)	NA	NA	NA
Electrical Service  <i>(Electrical Field Wiring connection point)</i>				
(C) Length of electrical raceway	38 (965)	29 5/8 (752)	41 3/4 (1060)	41 3/4 (1060)
RH End of case to center of farthest knockout	10 3/8 (264)	10 (254)	10 1/4 (260)	10 1/4 (260)
Back of case to center of end knockout	3 5/8 (92)	3 5/8 (92)	3 5/8 (92)	3 5/8 (92)
(B) RH End of case to RH end of raceway	5 (127)	5 (127)	5 (127)	5 (127)
Waste Outlet 				
(D) RH End of case to the center of waste outlet	24 1/8 (613)	24 1/8 (613)	24 1/8 (613)	72 1/4 (1835)
LH End of case to the center of waste outlet	24 1/8 (613)	48 1/4 (1226)	72 1/4 (1835)	72 1/4 (1835)
Back O/S of case to center of waste outlet	26 1/4 (667)	26 1/4 (667)	26 1/4 (667)	26 1/4 (667)
Water Seal 				
Edge of water seal to center of waste outlet	4 (102)	4 (102)	4 (102)	4 (102)
Outside diameter of the drip pipe	1 1/2 (38)	1 1/2 (38)	1 1/2 (38)	1 1/2 (38)
<i>(Field installed water seal outlets, tees, and connectors are shipped with the merchandiser.)</i>				
Refrigeration Outlet 				
Back of case to center of refrigeration outlet	29 3/8 (746)	29 3/8 (746)	29 3/8 (746)	29 3/8 (746)
(E) RH end of case to center of refrigeration outlet	8 1/4 (210)	8 1/4 (210)	8 1/4 (210)	8 1/4 (210)

Impact Elite ESBD
Meat & Delicatessen

Dimensions shown as in. and (mm).



NSF Certification

This merchandiser model is manufactured to meet ANSI/NSF (National Sanitation Foundation) Standard #7 requirements for construction, materials & cleanability.

REFRIGERATION DATA

Note: This data is based on store temperature and humidity that does not exceed 75°F and 55% R.H.

ESBD	
Discharge Air (°F)	25
Evaporator (°F)	20
Unit Sizing (°F)	18

Btu/hr/ft² — Unlit Shelves ESBD^{‡‡}

Parallel	355
Conventional	380

[‡]Optional energy efficient motors reduce the refrigeration load by 14 Btu/hr/ft.
^{‡‡} Add 20 Btu/hr/ft *per shelf row* for fluorescent lamps.

DEFROST DATA

ESBD	
Frequency (hr)	12
Defrost Water (lb/ft/day)	0.5
(± 15% based on case configuration and product loading).	

OFFTIME ESBD	
Temp Term (°F)	43
Failsafe (minutes)	90
<i>ELECTRIC OR GAS</i>	Not Recommended

Standard Defrost Thermostat
Close on rise: close 43°F — open 33°F

CONVENTIONAL CONTROLS

Low Pressure Backup Control

ESBD	
CI/CO (Temp °F)*	13

Indoor Unit Only, Pressure Defrost Termination (Temp °F)*

Not Recommended

*Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge (lb)**

4 ft	0.8
6 ft	1.2
8 ft	1.5
12 ft	2.0

**This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound.

Impact Elite <big>ESBD</big> Meat & Delicatessen

Electrical Data

Number of Fans	4 ft	6 ft	8 ft	12 ft
Refrigeration – 4W	1	2	2	3
Ambient Air Wipe – 15W	2	4	4	6

Merchandise	Amperes				Watts			
	4 ft	6 ft	8 ft	12 ft	4 ft	6 ft	8 ft	12 ft
Refrigeration Fans								
120V 60Hz Standard	0.31	0.62	0.62	0.93	24	48	48	72
120V 60Hz Energy Efficient	0.12	0.24	0.24	0.36	8	16	16	24
230V 50Hz Export	0.18	0.36	0.36	0.56	27	54	54	81
Ambient Air Wipe Fans								
120V 60Hz Standard	0.52	1.04	1.04	1.56	45	90	90	135
120V 60Hz Energy Efficient	NA							
230V 50Hz Export	0.30	0.60	0.60	0.90	50	100	100	150
Constant-on Anti-Sweat Heaters (On/Off Switch Optional)								
120V 60Hz Standard	3.34	6.68	6.68	10.02	400	800	800	1200
230V 50Hz Export	1.74	3.48	3.48	5.22	400	800	800	1200
Minimum Circuit Ampacity								
120V 60Hz Standard Fans	4.37	8.54	8.54	12.71				
120V 60Hz Energy Efficient Fans	4.20	8.20	8.20	12.20				
230V 50Hz Export Fans	2.42	4.64	4.64	6.88				

Maximum Over Circuit Protection 120V	20	20	20	20
Maximum Over Circuit Protection 230V	15	15	15	15

Standard Lighting* (120V 60hz)	4 ft	6 ft	8 ft	12 ft	4 ft	6 ft	8 ft	12 ft
2 Row Canopy	0.49	0.98	0.98	1.42	59	118	118	171

Optional Lighting (T-8 fluorescent)								
1 Row Rail	0.49	0.49	0.49	0.71	59	59	59	86
1 Row Ledge	0.49	0.49	0.49	0.71	59	59	59	86
1 Row Shelves	0.49	0.49	0.49	0.71	59	59	59	86
2 Row Shelves	0.49	0.98	0.98	1.42	59	118	118	171

115V Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting
 230V Lighting Circuit Total = Multiply 115V Lighting Circuit Total by 0.52

Product Data

<i>Recommended Usable Cube</i> ¹ (Cu Ft/Ft)	2.55 ft ³ /ft (0.24 m ³ /m)
<i>ARI Total Display Area</i> ² (Sq Ft/Ft)	4.82 ft ² /ft (1.47 m ² /m)
<i>Shelf Area</i> ³ (Sq Ft/Ft)	4.42 ft ² /ft (1.35 m ² /m)

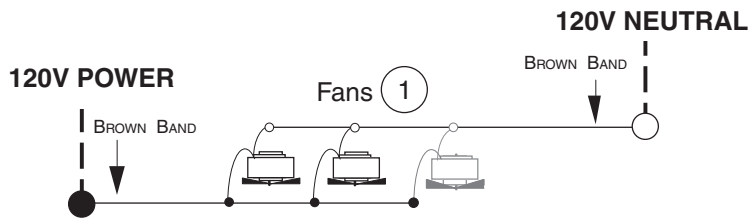
- ¹ ARI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]
² Computed using ARI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]
³ Shelf surface area is composed of bottom deck plus standard shelf complement, as shown in the Hussmann *Product Reference Guide*. The standard shelf complement for this model is NONE. Optional shelving complement is two rows: 1 row of 10-inch shelves and 1 row of 12-inch shelves.

ESTIMATED SHIPPING WEIGHT ⁵					
Case	<i>4 ft</i>	<i>6 ft</i>	<i>8 ft</i>	<i>12 ft</i>	Solid End
					<i>(each)</i>
lb (kg)	600 (272)	700 (318)	1100 (499)	1200 (545)	100 (45)

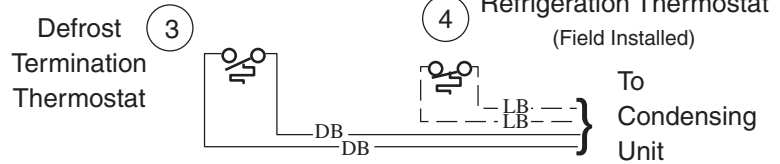
⁵ Actual weights will vary according to optional kits included.

Fan Wiring Offtime Defrost

Fans

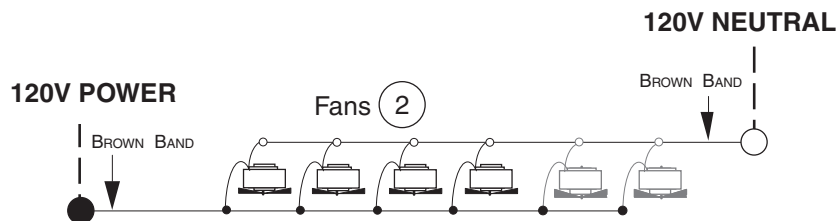


- 4 ft case has 1 Fan
- 6 ft case has 2 Fans
- 8 ft case has 2 Fans
- 12 ft case has 3 Fans



Ambient Fan Wiring Glass Air Wipe

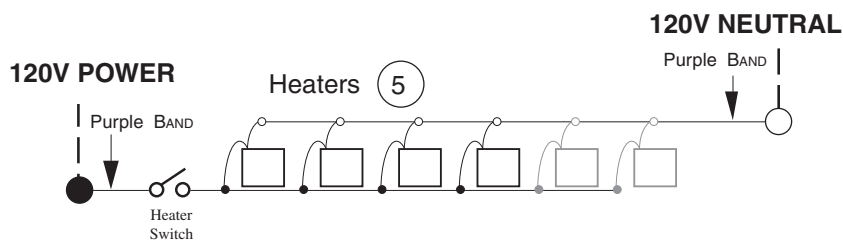
Fans



- 4 ft case has 2 Fans
- 6 ft case has 4 Fans
- 8 ft case has 4 Fans
- 12 ft case has 6 Fans

Ambient Heater Wiring

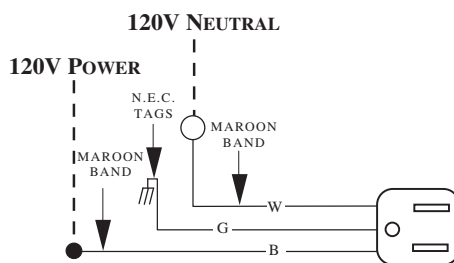
Heaters



- 4 ft case has 2 Heaters
- 6 ft case has 4 Heaters
- 8 ft case has 4 Heaters
- 12 ft case has 6 Heaters

Receptacles

Electric Service Receptacle



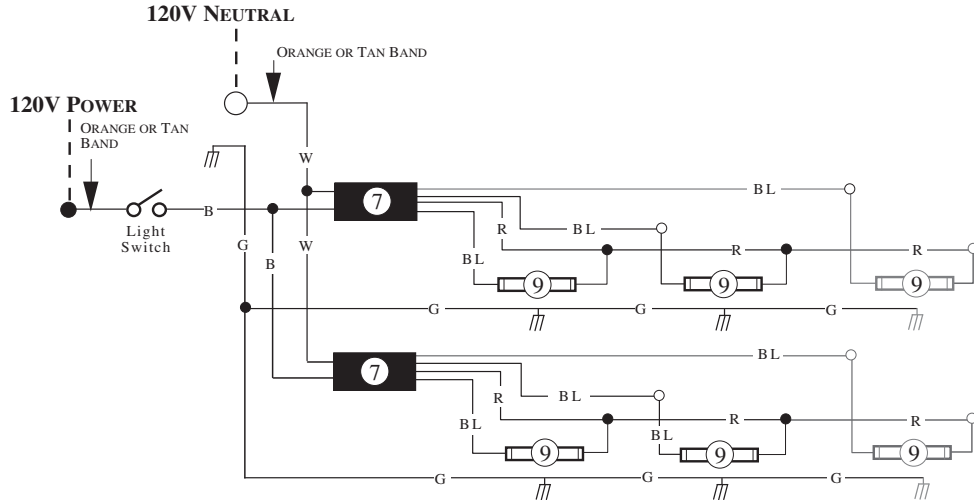
WARNING

All components must have mechanical ground, and the merchandiser must be grounded.
 Circled Numbers = Parts List Item Numbers
 Grayed components in 12 foot models only.

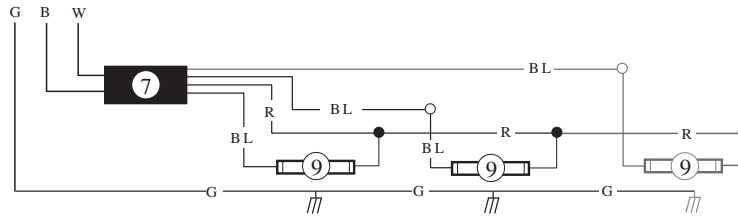
- R = Red G = Green BL = Blue LB = Light Blue DB = Dark Blue B = Black W = White
 ● = 120V POWER ○ = 120V NEUTRAL ≡ = Field GROUND ≡ = Case GROUND

Standard Lighting 2 Row Canopy

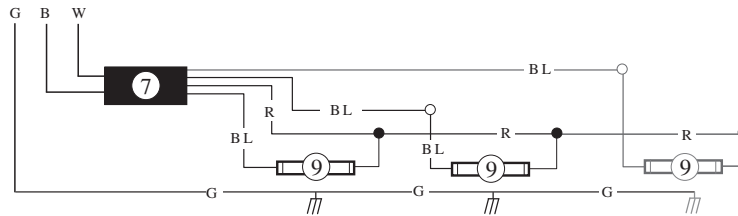
Light Circuits



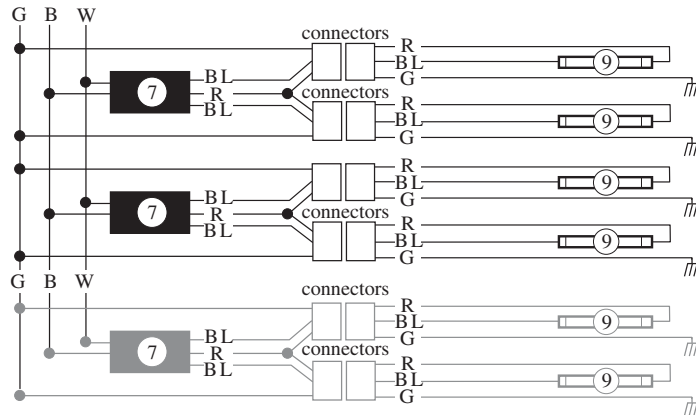
Optional Rail Light Circuit



Optional Ledge Light Circuit



Optional Shelf Harness and Light Circuits



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● = 120V POWER ○ = 120V NEUTRAL ≡ = Field GROUND ≡ = Case GROUND