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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES				THERMOSTATS			
A.	4W Standard	Fan Assembly	(1)	C.	0328028	Standard Non-adjustable Defrost Thermostat (CT.0382028)	(3)
	0392457	Fan Motor, Evaporator - 120V (MO.4410101)		D.	0353949	Optional Adj. Refrigeration Thermostat (CT.4481087)	(4)
	0409513	Fan Blade - 120V (FB.0409513)		HEATERS - AMBIENT			
		4W Energy Efficient Fan Assembly	(1)	E.	0460453	120V (HE.4850579)	(5)
	0477653	Fan Motor, Evaporator (120V) (MO.4410544)			0474031	230V (HE.4850707)	(6)
	0409513	Fan Blade - 120V (FB.0409513)		LAMPS AND BALLASTS			
		4W Export Fan Assembly	(1)	F.	Ballast, Electronic, 120V		(7)
	0436517	Fan Motor, Evaporator - 230V (MO.4410105)			0355716	2 lamps (BA.0355716)	
	0409514	Fan Blade - 230V (FB.4780655) embossing toward motor			0355398	3 lamps (BA.4480118)	
		B. 15W Ambient Fan Assembly	(2)		Ballast, Electronic, 230V 50-60 Hz		(8)
	0404551	Fan Motor, Ambient (120V) (MO.4700102)			0440215	2 lamps (BA.4481267)	
	0404552	Fan Motor, Ambient (230V) (MO.4410590)			0428652	3 lamps (BA.4480897)	
		Refrigeration Thermostat (CT.4481087)			0385104	Ballast Transformer (TR.4481191) (230V 50-60 Hz, per ballast)	
				G.	Fluorescent Lamp		(9)
					<i>Replace with like fixtures</i>		

Note: Rev. C adds product data and shipping weights on page 5.



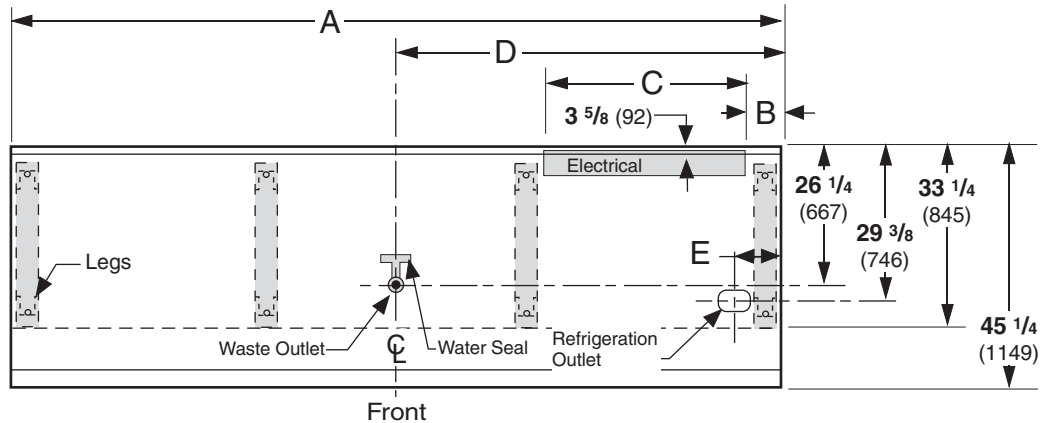
Engineering Plan Views





PHYSICAL DATA

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

Elite High Volume Meat & Delicatessen Curved Hinged Glass Models

Dimensions shown as in. and (mm).



	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 ESB DHV
Meat & Delicatessen

REFRIGERATION DATA

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

	ESBDHV
Discharge Air (°F)	27
Evaporator (°F)	20
Unit Sizing (°F)	18
Btu/hr/ft³ ‡ ‡	ESBDHV
Parallel	407
Conventional	426

‡ 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

	ESBDHV
Frequency (hr)	12
Defrost Water (lb/ft/day)	0.38
<i>(± 15% based on case configuration and product loading).</i>	
OFFTIME	ESBDHV
Temp Term (°F)	43
Failsafe (minutes)	90

ELECTRIC OR GAS Not Recommended

Standard Defrost Thermostat

Close on rise: close 43°F — open 33°F

CONVENTIONAL CONTROLS

Low Pressure Backup Control

	ESBDHV
CI/CO (Temp °F)*	13
Indoor Unit Only, Pressure Defrost Termination (Temp °F)*	Not Recommended

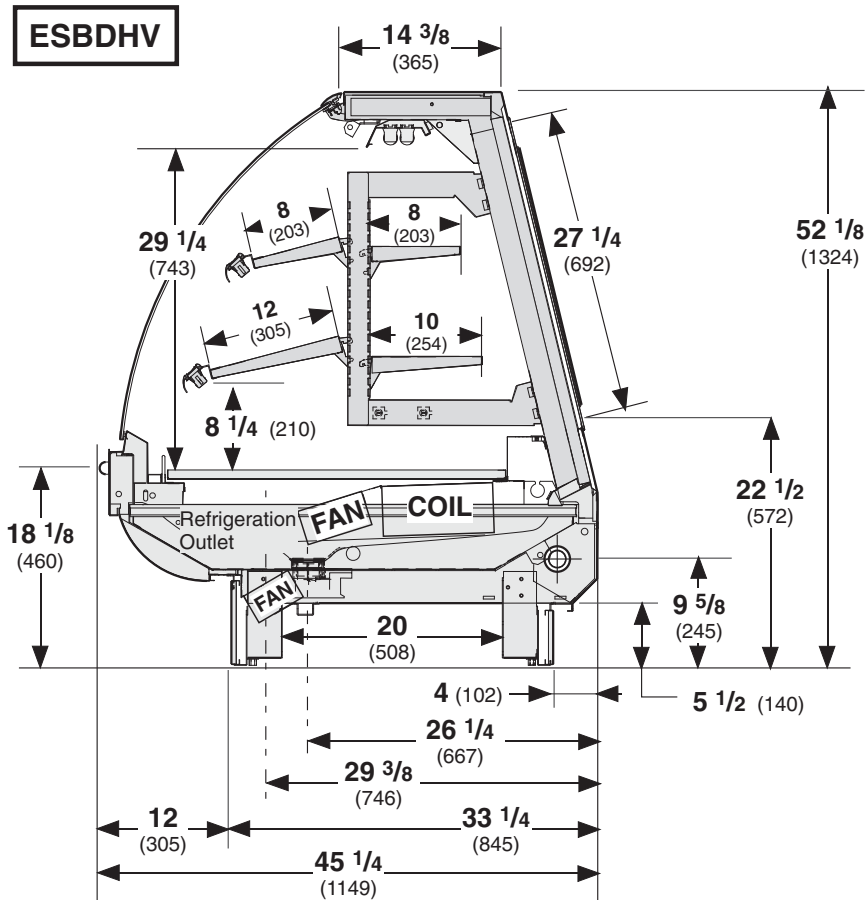
Not Recommended

*Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge (lb)**	ESBDHV
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.

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.

Impact Elite **ESBDHV**

Meat & Delicatessen

Electrical Data

	4 ft	6 ft	8 ft	12 ft
Number of Fans — 4W — Evaporator	1	2	2	3
Number of Fans — 15W — Ambient	2	4	4	6

			Amperes				Watts			
			4 ft	6 ft	8 ft	12 ft	4 ft	6 ft	8 ft	12 ft
Evaporator Fan										
120V	60Hz	Standard	0.31	0.62	0.62	0.93	24	48	48	72
120V	50Hz	Standard	0.38	0.76	0.76	1.14	27	54	54	81
230V	60Hz	Export	0.15	0.30	0.30	0.45	24	48	48	72
230V	50Hz	Export	0.18	0.36	0.36	0.54	27	54	54	81
120V	60Hz	Energy Efficient	0.12	0.24	0.24	0.36	8	16	16	24
230V	60Hz	Energy Efficient	NA							

Ambient Air Wipe Fans

120V	60Hz	Standard	0.52	1.04	1.04	1.56	45	90	90	135
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	4.37	8.54	8.54	12.71
120V	50Hz	Standard	4.44	8.68	8.68	12.92
230V	60Hz	Export	2.39	4.58	4.58	6.77
230V	50Hz	Export	2.42	4.64	4.64	6.86
120V	60Hz	Energy Efficient	4.20	8.20	8.20	12.20
230V	60Hz	Energy Efficient	NA			

Maximum Over Current Protection 120V

20 20 20 20

Maximum Over Current Protection 230V

15 15 15 15

Standard Lighting

2 Row Canopy	0.49	0.98	0.98	1.42	59	118	118	172
2 or 3 Row Shelves FRONT ONLY	0.71	1.42	1.42	2.13	86	172	172	258

Note: Back shelves are unlit. Front shelves are lit. Standard electrical load for Shelves is the same for 2 rows as for 3 rows.

Optional Lighting

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

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

Recommended Usable Cube ¹ (Cu Ft/Ft)	6.10 ft ³ /ft (0.57 m ³ /m)
AHRI Total Display Area ² (Sq Ft/Ft)	4.60 ft ² /ft (1.40 m ² /m)
Shelf Area ³ (Sq Ft/Ft)	5.71 ft ² /ft (1.74 m ² /m)

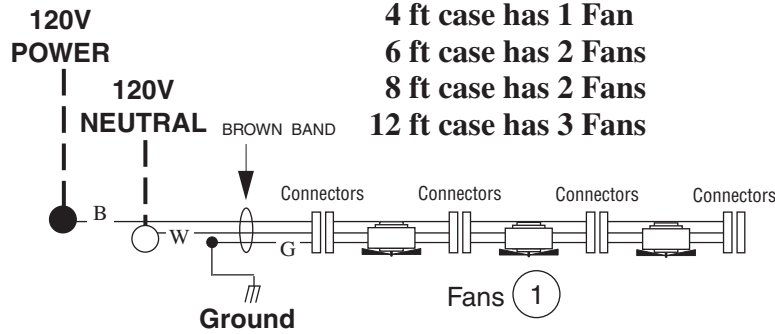
- ¹ AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]
- ² Computed using AHRI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]
- ³ Shelf surface area is composed of bottom deck plus standard shelf complement, as shown in the Hussmann **Product Reference Guide**. The standard shelf complement for this model is (1) front row of 8-inch shelves, (1) front row of 12-inch shelves, (1) rear row of 8-inch shelves and (1) rear row of 10-inch shelves.

ESTIMATED SHIPPING WEIGHT ⁴

Case	<i>4 ft</i>	<i>6 ft</i>	<i>8 ft</i>	<i>10 ft</i>	<i>12 ft</i>	Solid End
						<i>(each)</i>
lb (kg)	700 (318)	800 (363)	1000 (454)	NA	1200 (544)	100 (45)

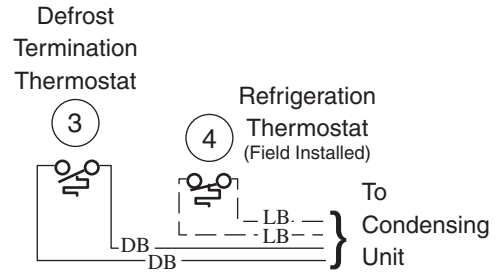
⁴ Actual weights will vary according to optional kits included.

Fans

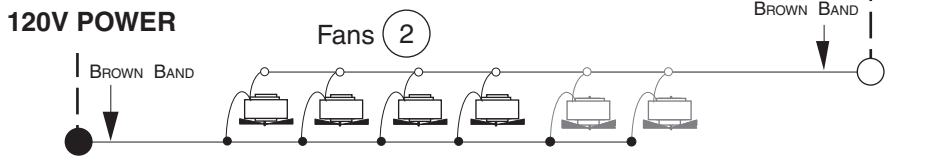


4 ft case has 1 Fan
 6 ft case has 2 Fans
 8 ft case has 2 Fans
 12 ft case has 3 Fans

Fan Wiring Offtime Defrost



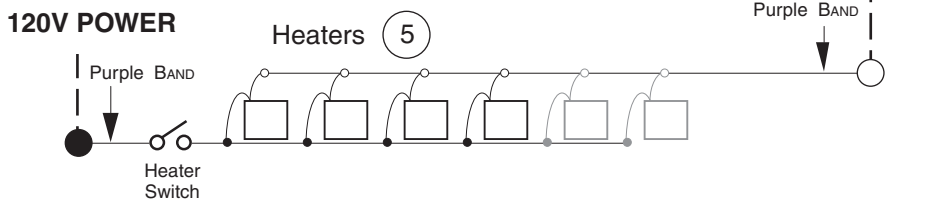
Fans



Ambient Fan Wiring Glass Air Wipe

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

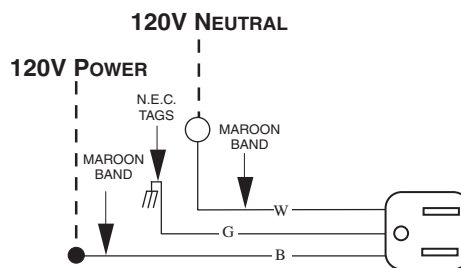
Heaters



Ambient Heater Wiring

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

Electric Service Receptacle



Receptacles

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.

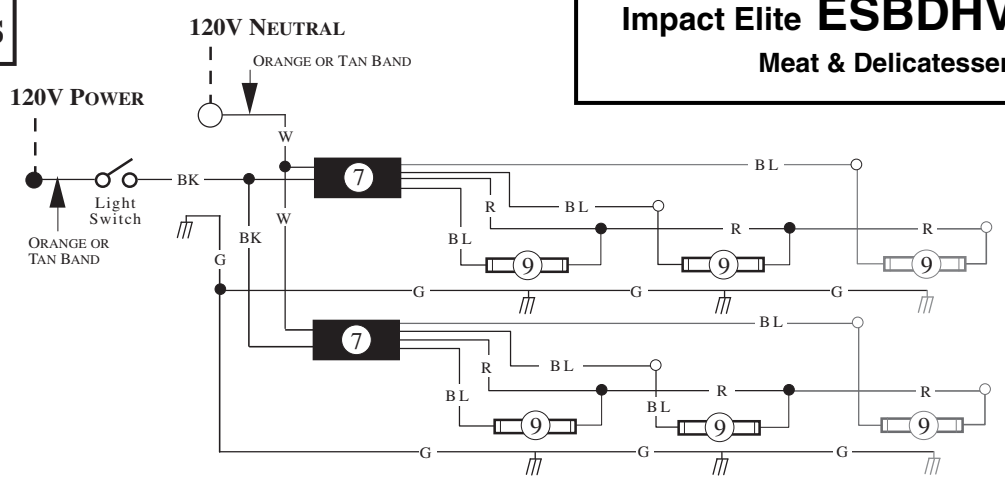
R = Red G = Green BL = Blue LB = Light Blue DB = Dark Blue B = Black W = White

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

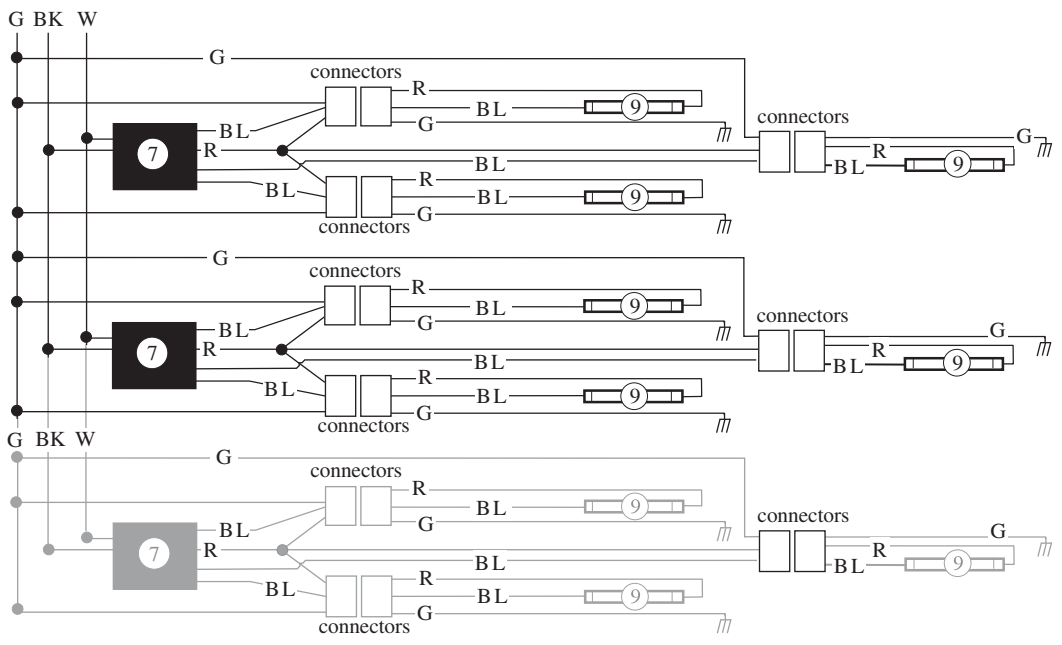
Light Circuits

Impact Elite **ESBDHV** Meat & Delicatessen

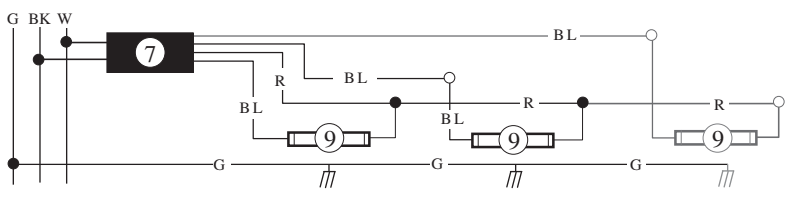
Standard Lighting 2 Row Canopy



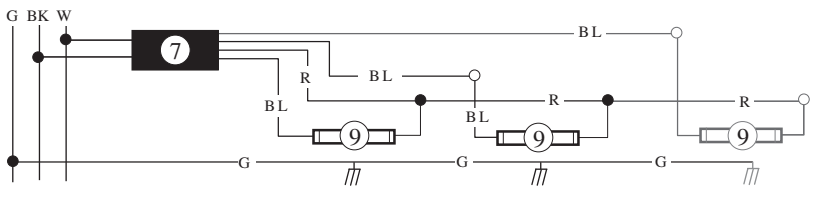
Standard Shelf Harness and Light Circuits for 2 or 3 Rows of Lighted Front Shelves



Optional Rail Light Circuit



Optional Ledge Light Circuit



WARNING

All components must have mechanical ground, and the merchandiser must be grounded.

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Grayed components in 12 foot models only.

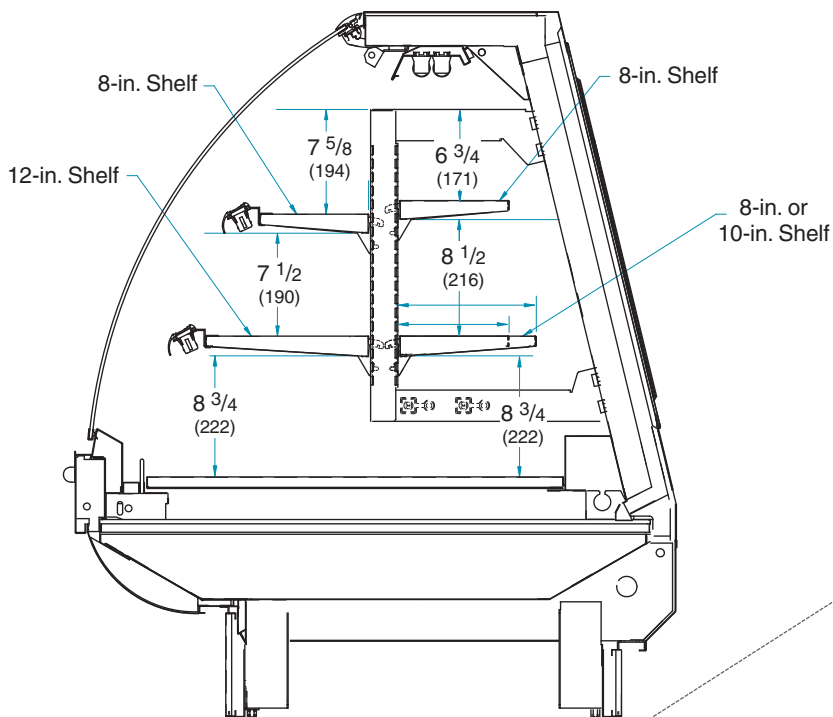
R = Red G = Green BL = Blue BK = Black W = White

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

Impact Elite ESDHV
Meat & Delicatessen

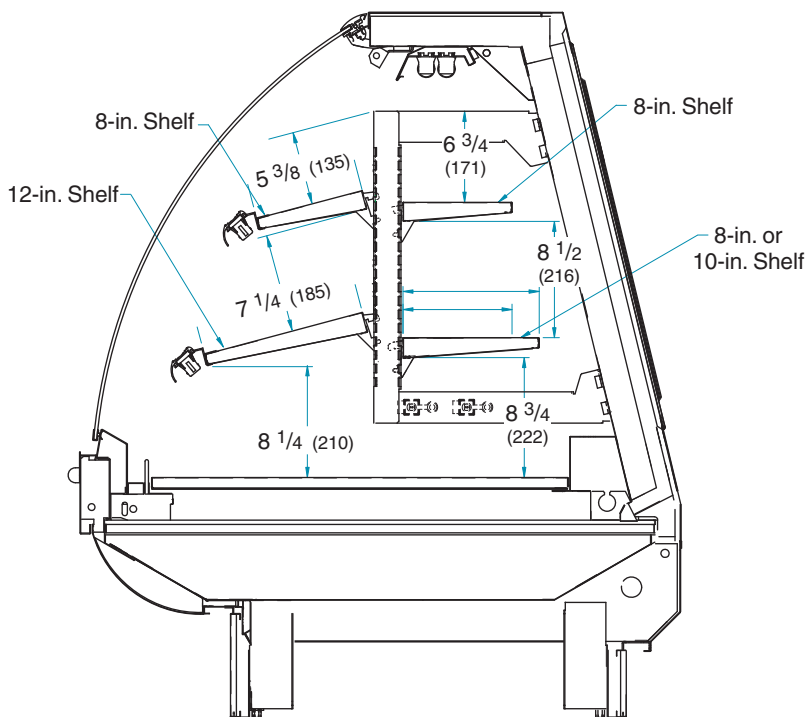
Shelf Configuration Options for Elite High Volume Service Case

Two Level Front Shelves, Two Level Back Shelves

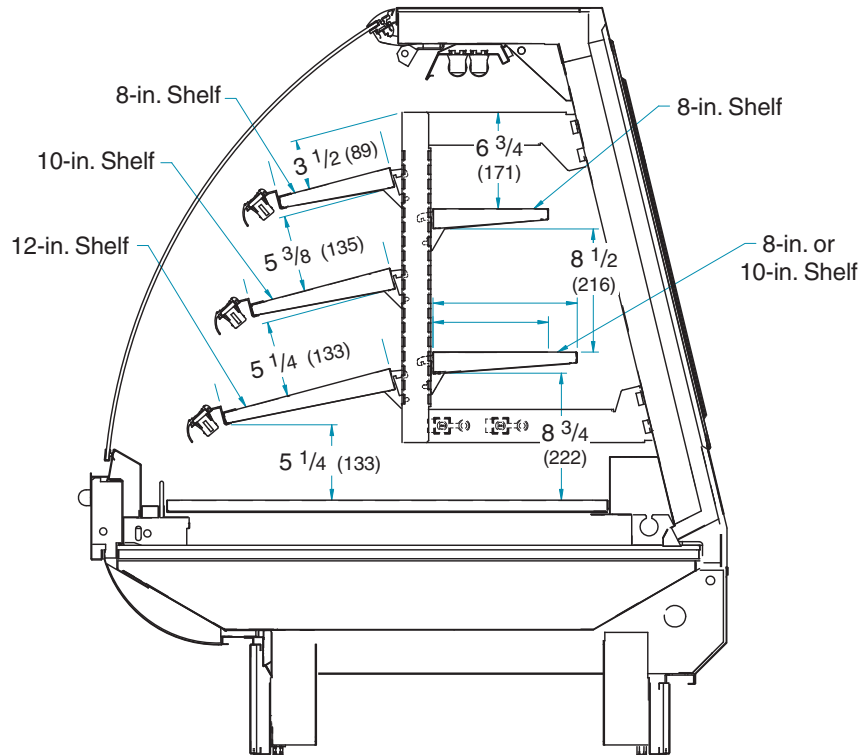


Each of these high volume cases must be equipped with one of the three shelf arrangements shown herein. Use of nonstandard shelf arrangements may adversely affect performance.

Two Angled Front Shelves, Two Level Back Shelves



Three Angled Front Shelves, Two Level Back Shelves



Each of these high volume cases must be equipped with one of the three shelf arrangements shown herein. Use of nonstandard shelf arrangements may adversely affect performance.