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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES AND THERMOSTATS				D.	0137880	Optional Adjustable Refrigeration Thermostat (CT.4481084)	(4)
A.	4W Standard Fan Assembly		(1)	HEATERS			
	0392457	Fan Motor, Evaporator (MO.4410101)		E.	0496496	Heater, Anti-Sweat (HE.4850738)	(5)
	0409513	Fan Blade, (FB.0409513) embossing toward motor		LAMPS AND BALLASTS			
B.	0404551	Fan Motor, Ambient (MO.0404551)	(2)	F.	0355716	Ballast, Electronic 2 lamps (BA.0355716)	(6)
C.	0411744	Standard Non-adjustable Defrost Thermostat (CT.0411744)	(3)		0355398	Ballast, Electronic 3 lamps (BA.4480118)	
				G.		Fluorescent Lamp <i>Replace with like fixtures</i>	(7)

Note: **P/N 0506801 supersedes P/N 0453557_B**; removes EEF; adds Product Data, page 5.

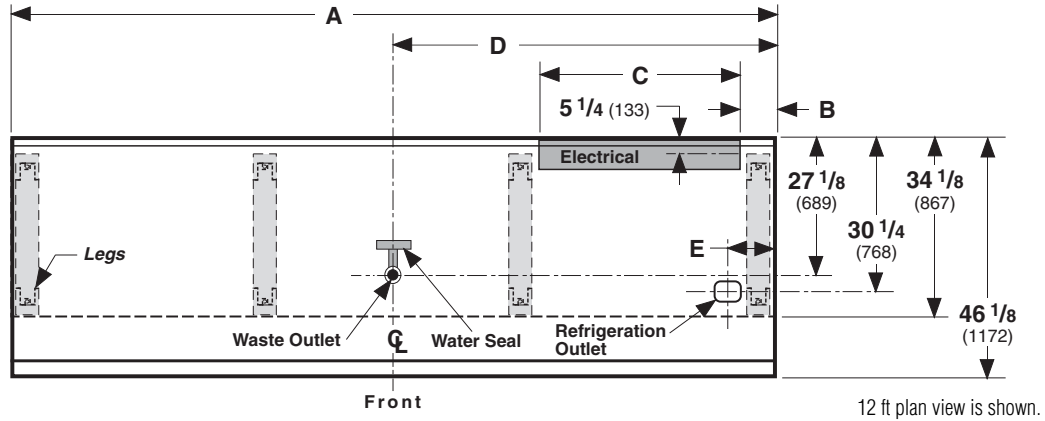
Engineering Plan Views

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

ES1S
Delicatessen
Precut & Packaged
Produce

10-2005

Dimensions shown as inches 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>)	46 1/8 (1172)	46 1/8 (1172)	46 1/8 (1172)	46 1/8 (1172)
Back of case to front of front panel	34 1/8 (867)	34 1/8 (867)	34 1/8 (867)	34 1/8 (867)
RH end of case to outside edge of external support	1 3/8 (35)	1 3/8 (35)	1 3/8 (35)	1 3/8 (35)
Distance between edges of external support and center support	NA	28 1/2 (724)	40 1/2 (1029)	40 1/2 (1029)
Distance between edges of center supports	NA	NA	NA	43 7/8 (1114)
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	34 1/2 (876)	26 (660)	38 (965)	38 (965)
RH End of case to center of farthest knockout	12 1/4 (311)	12 1/4 (311)	12 1/4 (311)	12 1/4 (311)
Back of case to center of end knockout	5 1/4 (133)	5 1/4 (133)	5 1/4 (133)	5 1/4 (133)
(B) RH End of case to RH end of raceway	6 7/8 (175)	6 7/8 (175)	6 7/8 (175)	6 7/8 (175)
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	27 1/8 (689)	27 1/8 (689)	27 1/8 (689)	27 1/8 (689)
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	30 1/4 (768)	30 1/4 (768)	30 1/4 (768)	30 1/4 (768)
(E) RH end of case to center of refrigeration outlet	8 3/8 (213)	8 3/8 (213)	8 3/8 (213)	8 3/8 (213)

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REFRIGERATION DATA

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

	ES1
Discharge Air (°F)	28
Evaporator (°F)	20
Unit Sizing (°F)	18
Btu/hr/ft	ES1^{‡‡}
Parallel	250
Conventional	270

DEFROST DATA

	ES1
Frequency (hr)	12
Defrost Water	0.8 lb/ft/day
<i>(± 15% based on case configuration and product loading.)</i>	
OFFTIME	ES1
Temp Term (°F)	43
Failsafe (minutes)	90
ELECTRIC OR GAS	Not Recommended
Standard Defrost Thermostat	
Close on rise: close 48°F – open 33°F	

CONVENTIONAL CONTROLS

Low Pressure Backup Control	
CI/CO*	ES1
Temp	13°F / 3°F

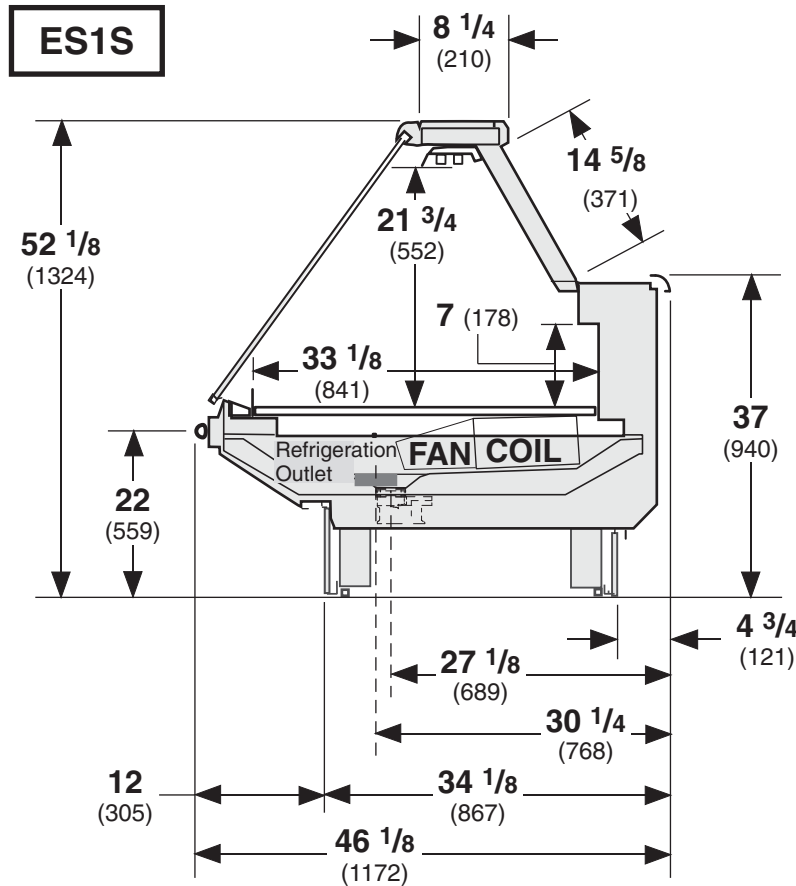
Indoor Unit Only, Pressure Defrost

Termination (Temp °F)*	43°F
<i>*Use a Temperature Pressure Chart to determine PSIG conversions.</i>	

Estimated Charge (lb)**	ES1
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. & (mm).



NSF Certification

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

Impact *Elite* ES1S

Delicatessen
Precut & Packaged Produce

Electrical Data

	4 ft	6 ft	8 ft	12 ft
Number of Fans — 4W	1	2	2	3
Number of Fans — 4W (Export) (Export: 230V 50 hz shown)	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
Fans								
120V 60Hz Standard	0.31	0.62	0.62	0.93	24	48	48	72
230V 50Hz Export	0.18	0.36	0.36	0.54	27	54	54	81
Fans (Ambient Air Wipe)								
120V 60Hz Two-pole Muffin Fan	0.52	1.04	1.04	1.56	0.30	60	60	90
230V 50Hz Export	0.3	0.6	0.6	0.9				
Constant On Anti-sweat Heaters	0.13	0.26	0.26	0.39	16	32	32	48
Minimum Circuit Ampacity								
120V 60Hz Standard Fans	1.16	2.12	2.12	3.08				
230V 50Hz Export Fans	0.68	1.16	1.16	1.64				
Maximum Over Current Protection								
230V 50Hz Export	20	20	20	20				
	15	15	15	15				
Standard Lighting								
2 Rows Canopy	0.49	0.98	0.98	1.42	59	118	118	171
Optional Lighting (T-8 fluorescent)								
1 Row of Rail Lights	0.49	0.49	0.49	0.71	59	59	59	86
1 Row of Ledge Lights	0.49	0.49	0.49	0.71	59	59	59	86

115V Lighting Circuit Total = Standard Lighting + Total Optional Lighting

230V Lighting Circuit Total = Multiply 115V Lighting Circuit Total by 0.52

Product Data

<i>ARI Refrigerated Volume</i> ¹ (Cu Ft/Ft)	3.89 ft ³ /ft (0.36 m ³ /m)
<i>Recommended Usable Cube</i> ² (Cu Ft/Ft)	1.61 ft ³ /ft (0.15 m ³ /m)
<i>ARI Total Display Area</i> ³ (Sq Ft/Ft)	3.55 ft ² /ft (1.08 m ² /m)
<i>Shelf Area</i> ⁴ (Sq Ft/Ft)	2.76 ft ² /ft (0.84 m ² /m)

- ¹ Computed using ARI 1200 standard methodology: Refrigerated Volume, ft³ [m³]/Unit of Length, ft [m]
- ² ARI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]
- ³ Computed using ARI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]
- ⁴ 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.

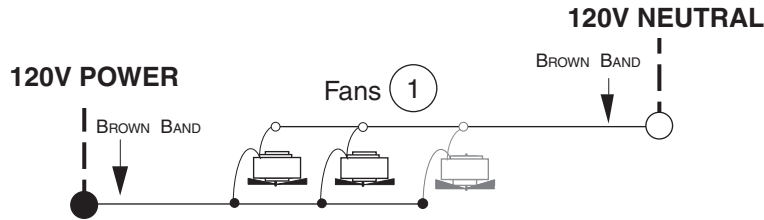
ESTIMATED SHIPPING WEIGHT⁵

Case					Solid End
	<i>4 ft</i>	<i>6 ft</i>	<i>8 ft</i>	<i>12 ft</i>	<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.

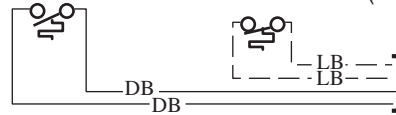
Fan Wiring Offtime Defrost

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

Defrost Termination Thermostat (3)

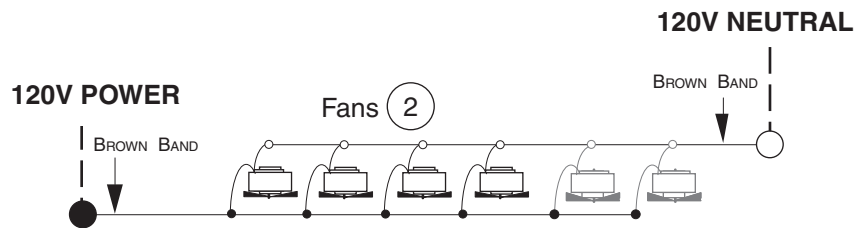


Refrigeration Thermostat (4) (Field Installed)

To Condensing Unit

Ambient Fan Wiring Glass Air Wipe

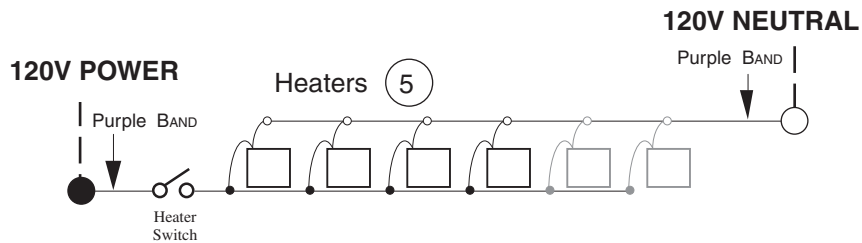
Fans



- 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

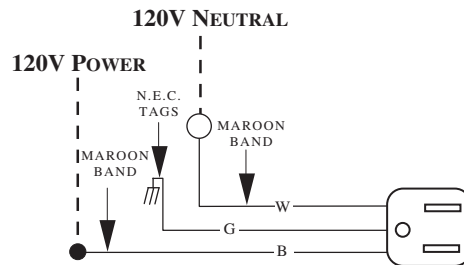
Heaters



- 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.

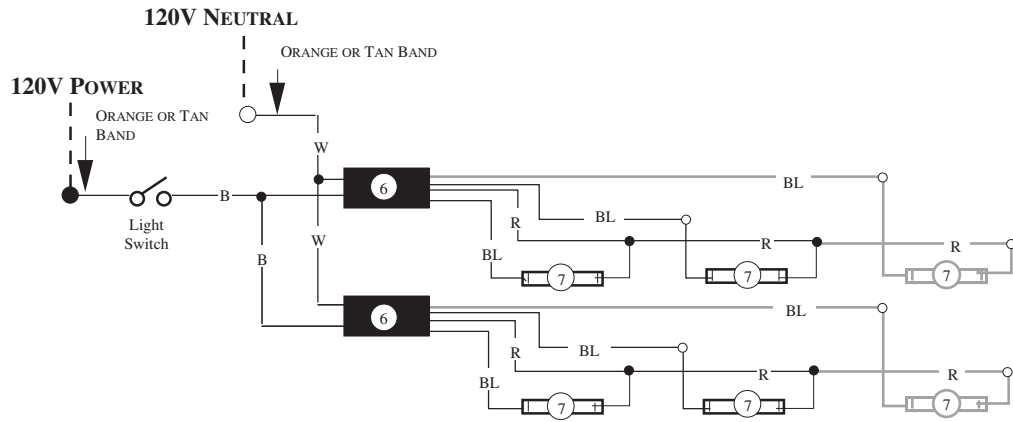
Circled Numbers = Parts List Item Numbers

Grayed components in 12 foot models only.

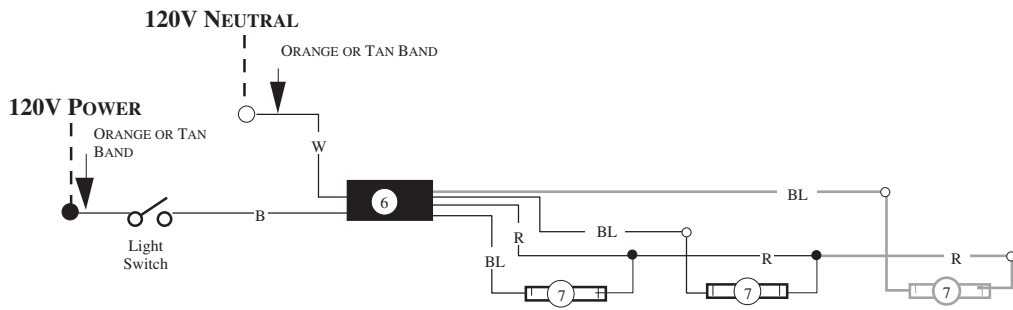
R = Red G = Green BL = Blue LB = Light Blue DB = Dark Blue B = Black W = White

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

Standard Lighting 2 Rows Canopy



Optional Lighting: 1 Row Ledge or 1 Row Rail



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 Y = Yellow G = Green BL = Blue B = Black W = White

● = 120V POWER ○ = 120V NEUTRAL