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Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES AND THERMOSTATS				LAMPS AND BALLASTS			
A.	7W Standard	Fan Assembly	(1)	D.	Ballast, Electronic		
	0058698	Fan Motor, Evaporator (MO.4410102)			0466234	2 lamps (BA.4480823)	(4)
	0142780	Fan Blade (FB.0142780)			0466235	3 lamps (BA.4480901)	
		7W Energy Efficient Fan Assembly			0466236	4 lamps (BA.4481095)	
	0439052	Fan Motor, Evaporator (MO.4410110)		E.	Fluorescent Lamp		(5)
	0142780	Fan Blade (FB.0142780)			<i>Replace with like fixtures</i>		
		7W Export Fan Assembly					
	0436516	Fan Motor, Evaporator (MO.4410106)					
	0142780	Fan Blade (FB.0142780)					
B.	0411744	Standard Non-adjustable Defrost Thermostat (CT.0411744)	(2)				
C.		Optional Adjustable Refrigeration Thermostat	(3)				

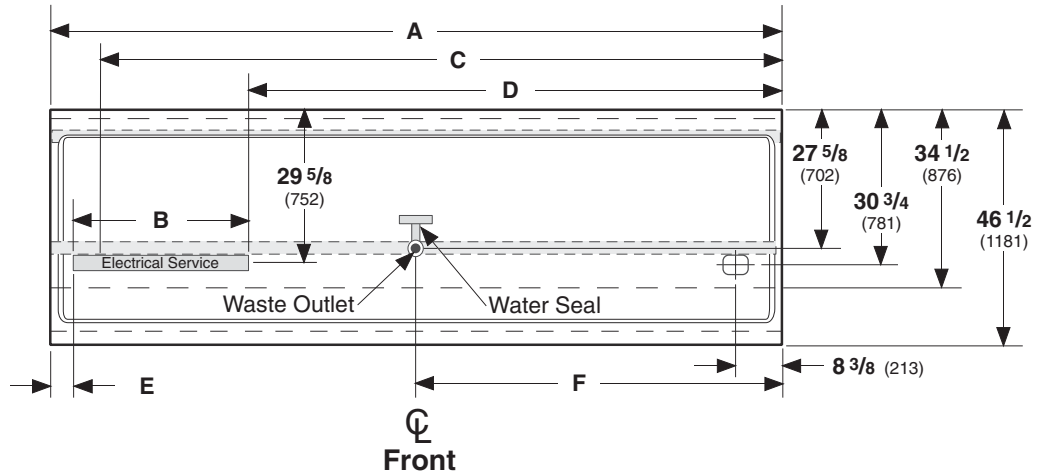
Engineering Plan Views





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

Dimensions shown as inches and (mm).

E3S
Delicatessen
Precut & Packaged
Produce

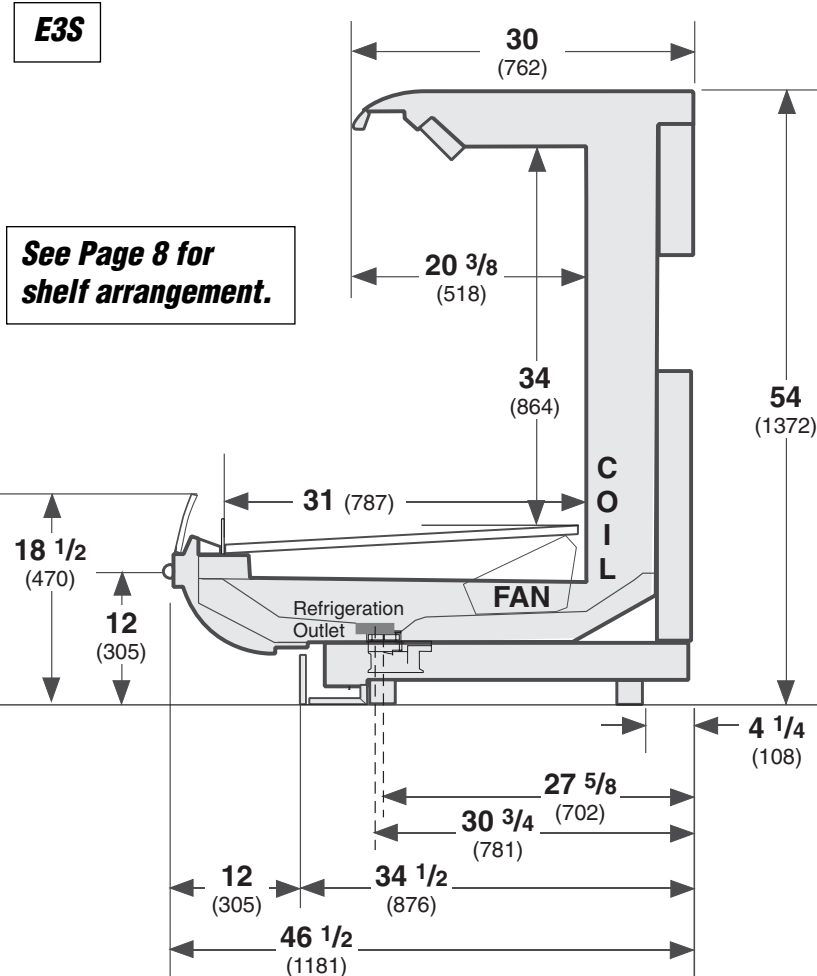
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General	4 ft	6 ft	8 ft	12 ft
(A) Case Length (<i>without ends or partitions</i>)	48 1/8 (1222)	72 1/8 (1832)	96 1/4 (2445)	144 3/8 (3667)
Maximum O/S dimension back to front (<i>with bumper</i>)	46 1/2 (1181)	46 1/2 (1181)	46 1/2 (1181)	46 1/2 (1181)
Back of case to front of front panel	34 1/2 (876)	34 1/2 (876)	34 1/2 (876)	34 1/2 (876)
Back of case to O/S edge of front skid rail	29 3/8 (746)	29 3/8 (746)	29 3/8 (746)	29 3/8 (746)
Width of skid rail	4 1/2 (114)	4 1/2 (114)	4 1/2 (114)	4 1/2 (114)
RH end of case to outside edge of external support	1 3/8 (34)	1 3/8 (34)	1 3/8 (34)	1 3/8 (34)
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	44 (1118)
Stub-up area between front skid rail and front panel	5 3/4 (146)	5 3/4 (146)	5 3/4 (146)	5 3/4 (146)
Electrical Service  (<i>Electrical Field Wiring connection point</i>)				
(B) Length of electrical raceway	18 3/8 (467)	18 3/8 (467)	37 (940)	37 (940)
(C) RH End of case to center of farthest knockout	36 5/8 (930)	60 3/4 (1543)	84 3/4 (2153)	132 3/4 (3372)
Back of case to center of end knockout	29 5/8 (752)	29 5/8 (752)	29 5/8 (752)	29 5/8 (752)
(D) RH End of case to RH end of wireway	27 5/8 (702)	51 5/8 (1311)	57 1/4 (1454)	105 1/8 (2670)
(E) LH End of case to LH end of wireway	2 1/8 (54)	2 1/8 (54)	2 (51)	2 1/4 (57)
Waste Outlet 				
(F) RH End of case to the center of waste outlet	24 1/4 (616)	24 1/4 (616)	24 1/2 (622)	72 1/4 (1834)
LH End of case to the center of waste outlet	23 7/8 (606)	47 7/8 (1216)	71 3/4 (1822)	72 1/8 (1832)
Back O/S of case to center of waste outlet	27 5/8 (702)	27 5/8 (702)	27 5/8 (702)	27 5/8 (702)
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>NOTE: Water seal outlet must clear front skid rail; water seal rotation in forward direction only due to low base.</i>				
Refrigeration Outlet 				
Back of case to center of refrigeration outlet	30 3/4 (781)	30 3/4 (781)	30 3/4 (781)	30 3/4 (781)
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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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.

REFRIGERATION DATA

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

	E3S	
Discharge Air (°F)	29	
Evaporator (°F)	21	
Unit Sizing (°F)	19	

Btu/hr/ft — Unlit Shelves

E3S ^{‡‡}	Parallel	Conventional
UNLIT	1180	1280

^{‡‡} Add 20 Btu/hr/ft *per shelf row* for fluorescent lamps.

DEFROST DATA

	E3S
Frequency (hr)	6
Defrost Water	8 lb/ft/day
(± 15% based on case configuration and product loading).	

<i>OFFTIME</i>	E3S
Temp Term (°F)	48
Failsafe (minutes)	40

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**	E3S
Temp (°F)	14 / 4

Indoor Unit Only, Pressure Defrost

Termination (Temp °F)** 48°F

**Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge (lb)***	E3S
4 ft	0.9
6 ft	1.8
8 ft	1.9
12 ft	2.9

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

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Electrical Data

	4 ft	6 ft	8 ft	12 ft
Number of Fans—7W	1	2	2	3
Number of Fans—7W (Export)	1	2	2	3

(Export: 230V 50 Hz shown)

	Amperes				Watts			
	4 ft	6 ft	8 ft	12 ft	4 ft	6 ft	8 ft	12 ft
Evaporator Fan								
120V 60Hz Standard	0.50	1.00	1.00	1.50	39	78	78	117
120V 50Hz Standard	0.55	1.10	1.10	1.65	42	84	84	126
230V 60Hz Export	0.25	0.50	0.50	0.75	39	78	78	117
230V 50Hz Export	0.28	0.56	0.56	0.84	42	84	84	126
120V 60Hz Energy Efficient	0.19	0.38	0.38	0.57	14	28	28	42
230V 60Hz Energy Efficient	0.10	0.20	0.20	0.30	14	28	28	42

Cycling Anti-sweat Heaters NA

Minimum Circuit Ampacity

120V 60Hz Standard	0.70	1.20	1.20	1.70
120V 50Hz Standard	0.75	1.30	1.30	1.85
230V 60Hz Export	0.45	0.70	0.70	0.95
230V 50Hz Export	0.48	0.76	0.76	1.04
120V 60Hz Energy Efficient	0.39	0.58	0.58	0.77
230V 60Hz Energy Efficient	0.30	0.40	0.40	0.50

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

208V Electric Defrost Heaters NA

Standard Lighting (T-8 fluorescent)

2 Rows of Canopy	0.51	1.01	1.01	1.52	66	122	122	183
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Optional Lighting (T-8 fluorescent)

1 Row of Rail Lights	0.51	0.51	0.51	0.76	62	62	62	96
1 Row of Ledge Lights	0.51	0.51	0.51	0.76	62	62	62	96

Optional Shelf Lighting (T-8 fluorescent)

1 Row of Shelves	0.51	0.51	0.51	0.76	62	62	62	96
2 Rows of Shelves	0.51	1.01	1.01	1.52	66	122	122	183
3 Rows of Shelves	0.76	1.53	1.53	2.28	92	184	184	274

120V Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting

230V Lighting Circuit Total = Multiply 120V Lighting Circuit Total by 0.52

<p>Impact <i>Elite</i> E3S Delicatessen Precut & Packaged Produce</p>

Product Data

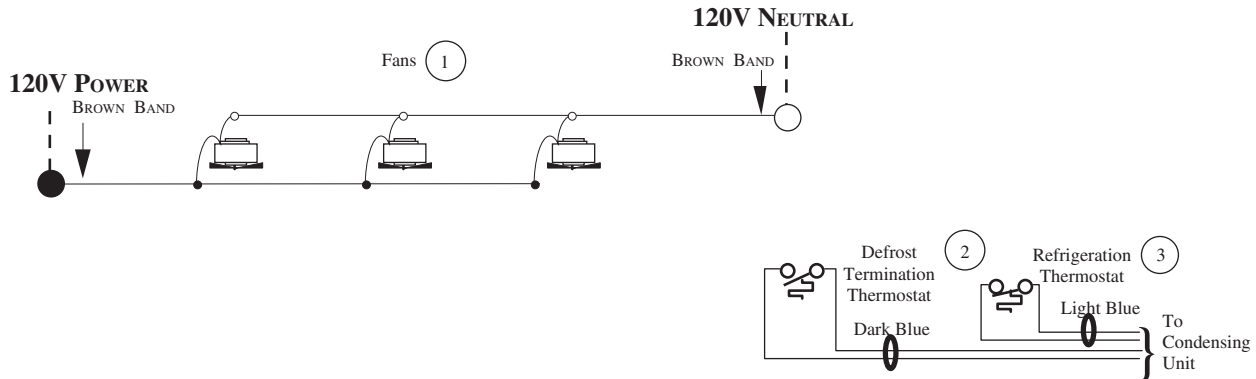
<i>ARI Refrigerated Volume</i> ¹ (Cu Ft/Ft)	5.00 ft ³ /ft (0.47 m ³ /m)
<i>Recommended Usable Cube</i> ² (Cu Ft/Ft)	4.50 ft ³ /ft (0.42 m ³ /m)
<i>ARI Total Display Area</i> ³ (Sq Ft/Ft)	3.05 ft ² /ft (0.93 m ² /m)
<i>Shelf Area</i> ⁴ (Sq Ft/Ft)	7.10 ft ² /ft (2.16 m ² /m)

- 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 (1) row of 14-inch shelf, (1) row of 18-inch shelf and (1) row of 22-in shelf.

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>
1b (kg)	600 (272)	800 (363)	1000 (454)	1300 (590)	100 (45)
⁵ Actual weights will vary according to optional kits included.					

Fan Wiring Offtime Defrost

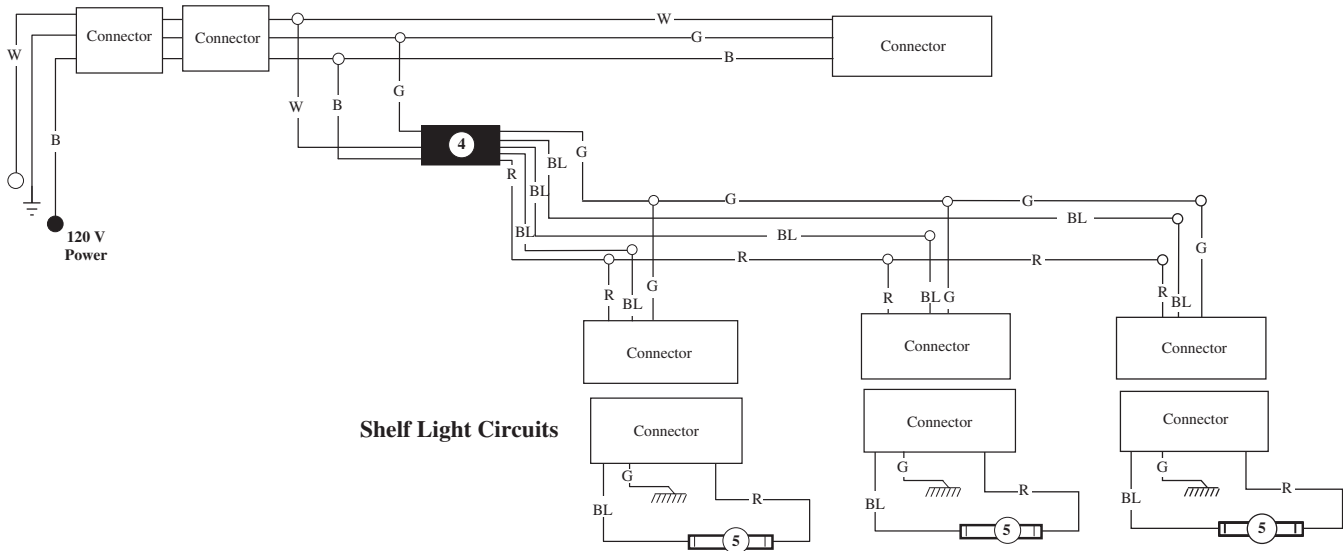
2 & 3 Fans



Optional Shelf Lighting Fluorescent Fixtures

Optional Shelf Harness and Light Circuits for One Row of Shelves

Shelf Harness



WARNING

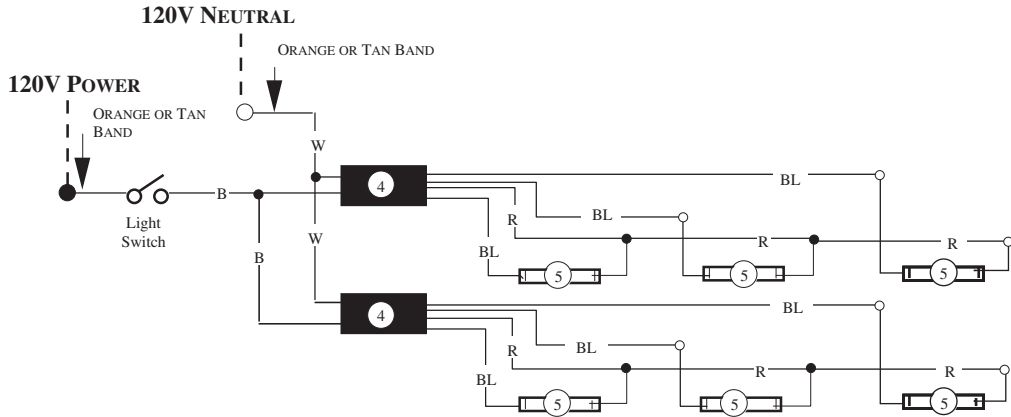
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

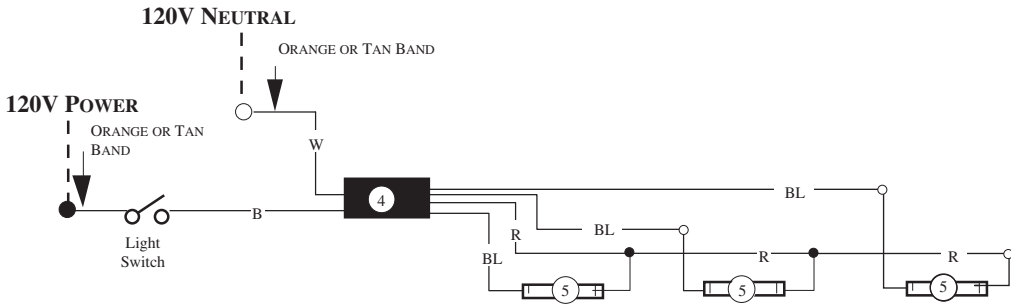
R = Red Y = Yellow G = Green BL = Blue B = Black W = White

● = 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.

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SHELF CONFIGURATION

This merchandiser is designed for three shelves.

This illustration shows recommended shelf depth and shelf angle for the three locations.

It is critical to case performance that no product, shelf or stop extend beyond the load limit, as shown in this illustration. This configuration supports the air curtain and provides optimal case performance.

Check with Hussmann engineering before using a different configuration.

