

We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.

Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
<b>FAN ASSEMBLIES, AND THERMOSTATS</b>				<b>HEATERS (CONTINUED)</b>			
A.	<b>4W</b> Standard Fan Assembly		(1)	F.	208V Drip Pan Defrost Heaters, Electric		(6)
	0392457	Fan Motor, Evaporator (MO.4410101)			0462160	8 ft case (HE.4850636)	
	0464847	Fan Blade (FB.4780649)			0497581	10 ft case (HE.4850711)	
					0444296	12 ft case (HE.4850572)	
	<b>4W</b> Energy Efficient Fan Assembly		(1)	F.	120V Drip Pan Defrost Heaters, Koolgas		(7)
	0477653	Fan Motor, Evaporator (MO.4410544)			0465907	8 ft case (HE.4850622)	
	0464847	Fan Blade (FB.4780649)			0465908	12 ft case (HE.4850623)	
B.	Optional Adjustable Refrigeration Thermostat		(2)	G.	Nosing Anti-sweat Heaters		(8)
					0495007	8 ft case (HE.4850685)	
C.	0398557	Defrost Termination Thermostat (Electric Defrost only) (CT.4440611)	(3)		0497590	10 ft case (HE.4850712)	
					0495008	12 ft case (HE.4850686)	
D.	<u>0481370</u>	Heater Switch (Koolgas Defrost only) (CT.4440738)	(4)	H.	Return Grille Anti-sweat Heaters		(9)
					0495011	8 ft case (HE.4850689)	
					0497582	10 ft case (HE.4850713)	
					0495012	12 ft case (HE.4850690)	
<b>HEATERS</b>				I.	Return Glass Anti-sweat Heaters		(10)
E.	208V Evaporator Defrost Heaters		(5)		0474778	8 ft case (GL.4987838)	
	0462159	8 ft case (HE.4850603)			0497575	10 ft case (GL.4850714)	
	0497579	10 ft case (HE.4850710)			0474779	12 ft case (GL.4987839)	
	0444058	12 ft case (HE.4850571)		J.	Discharge Glass Anti-sweat Heaters		(11)
					0465421	8 ft case (GL.4978595)	
					0497576	10 ft case (GL.4850715)	
					0465422	12 ft case (GL.4978596)	

Note: Revision F updates the Heater Switch part number on Page 1 and adds capacity and weight (Page 5).

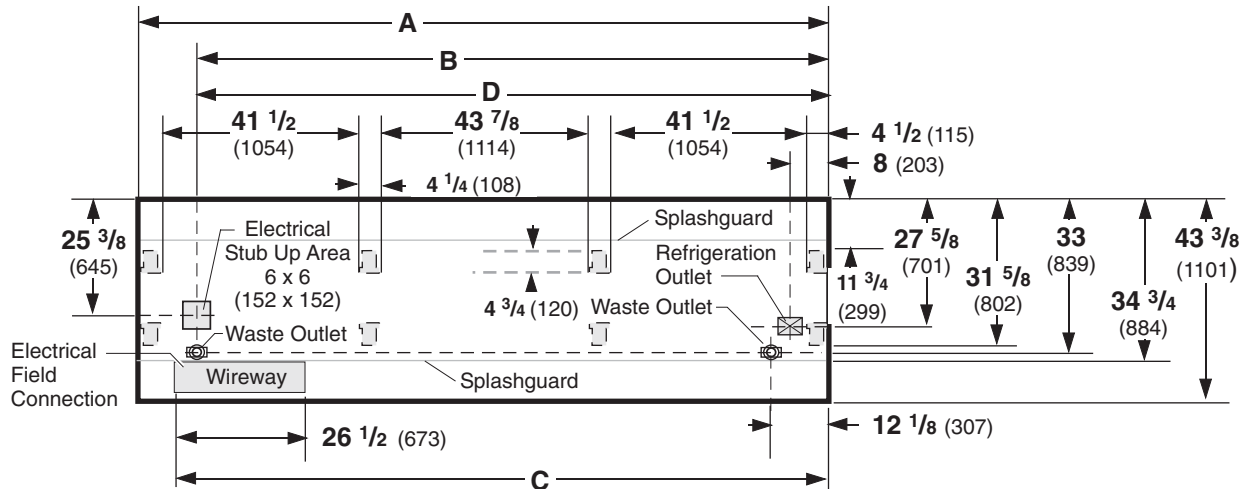
# Engineering Plan Views

## PHYSICAL DATA

Merchandiser Drip Pipe (in.)	1 1/4
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	5/8

### Narrow Island Frozen Food

Dimensions shown as inches & (mm).



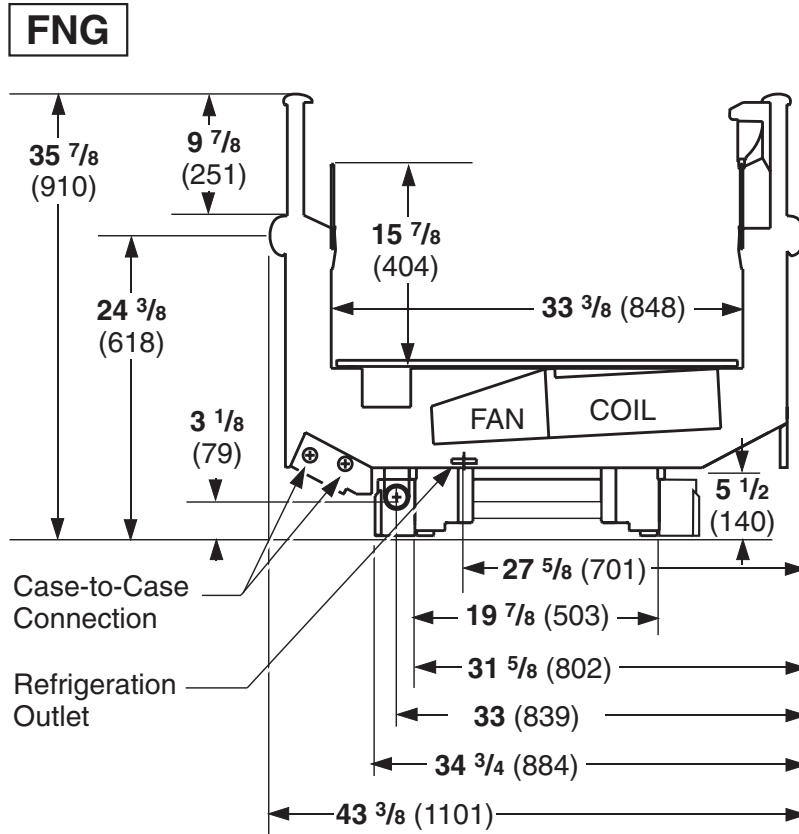
**NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.**

FRONT

	8 ft	10 ft	12 ft
<b>General</b>			
<b>(A) Case Length (without ends or partitions)</b>	96 3/8 (2448)	120 1/2 (3061)	144 1/2 (3670)
<i>(Each end and insulated partition adds 2 in. (51 mm) to case line up.)</i>			
Maximum O/S dimension of case back to front <i>(includes bumper)</i>	43 3/8 (1101)	43 3/8 (1101)	43 3/8 (1101)
Back of case to front of splashguard	34 3/4 (884)	34 3/4 (884)	34 3/4 (884)
Back of case to O/S edge of front leg	31 5/8 (802)	31 5/8 (802)	31 5/8 (802)
Distance between edges of external legs and center legs	41 1/2 (1054)	29 1/2 (749)	41 1/2 (1054)
Distance between edges of center legs	NA	43 7/8 (1114)	43 7/8 (1114)
Distance between front legs and splashguard	3 1/8 (82)	3 1/8 (82)	3 1/8 (82)
<b>Electrical Service</b> <i>(Electrical Field Wiring connection point)</i>			
<b>(B) RH End of case to center of stub up area</b>	84 1/4 (2141)	108 3/8 (2753)	132 3/8 (3363)
Back of case to center of stub up area	25 3/8 (645)	25 3/8 (645)	25 3/8 (645)
Length of electrical wireway	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
<b>(C) RH End of case to LH end of wireway</b>	90 1/8 (2289)	114 1/4 (2902)	138 1/4 (3511)
<b>Waste Outlets (One each end)</b>			
<b>(D) RH End of case to the center of LH waste outlet</b>	84 1/4 (2141)	108 3/8 (2753)	132 3/8 (3363)
RH End of case to the center of RH waste outlet	12 1/8 (307)	12 1/8 (307)	12 1/8 (307)
Back O/S of case to center of waste outlets	33 (839)	33 (839)	33 (839)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)
<b>Refrigeration Outlet</b>			
Back of case to center of refrigeration outlet	27 5/8 (701)	27 5/8 (701)	27 5/8 (701)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)	8 (203)

Narrow Island Display with Glass Walls

Dimensions shown as inches & (mm).



**NSF Certification**

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

**Impact *Excel* FNG**  
**Low / Medium Temperature**

**REFRIGERATION DATA**

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

	MED	FF	IC
<b>Discharge Air (°F)</b>	+24	-12	-22
<b>Evaporator (°F)</b>	+19	-20	-30
<b>Unit Sizing (°F)</b>	+17	-23	-33
<b>Btu/hr/ft</b>			
<b>Parallel</b>	295	460	470
<b>Conventional</b>	305	480	490

**DEFROST DATA**

	MED	FF	IC
<b>Frequency (hr)</b>	24	24	24
<b>Defrost Water (lb/ft/day)</b>	1.1	1.05	0.9

(± 15% based on case configuration and product loading).

<b>ELECTRIC</b>	MED	FF	IC
<b>Temp Term (°F)</b>	48	48	48
<b>Failsafe (minutes)</b>	60	60	60

<b>GAS</b>	MED	FF	IC
<b>Duration (minutes)</b>	NA	15	18

**OFFTIME** Not Recommended

**Standard Defrost Thermostat**

Close on rise: close 48°F — open 33°F

**CONVENTIONAL CONTROLS**

**Low Pressure Backup Control — CI/CO \***

MED	+12°F / +2°F
FF	-17°F / -29°F
IC	-27°F / -39°F

**Indoor Unit Only, Pressure Defrost Termination\***

Not Recommended

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

**Estimated Charge (lb)\*\***

<b>8 ft</b>	2.0
<b>10 ft</b>	2.5
<b>12 ft</b>	3.0

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

**Length Added to Lineup by Each**

**End or Partition (in.)** 2

<b>Impact <i>Excel</i> FNG</b> <b>Low / Medium Temperature</b>
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**Electrical Data**

	<b>8 ft</b>	<b>10 ft</b>	<b>12 ft</b>				
<b>Number of Fans – 4W Evaporator</b>	<b>2</b>	<b>2</b>	<b>2</b>				
		<b>Amperes</b>				<b>Watts</b>	
	<b>8 ft</b>	<b>10 ft</b>	<b>12 ft</b>	<b>8 ft</b>	<b>10 ft</b>	<b>12 ft</b>	
<b>Evaporator Fans</b>							
120V 60Hz Standard	0.62	0.62	0.62	48	48	48	
120V 50Hz Standard	0.76	0.76	0.76	54	54	54	
230V 60Hz Export	0.30	0.30	0.30	48	48	48	
230V 50Hz Export	0.36	0.36	0.36	54	54	54	
120V 60Hz Energy Efficient	0.24	0.24	0.24	16	16	16	
230V 60Hz Energy Efficient	0.12	0.12	0.12	16	16	16	
<b>Anti-sweat Heaters (on fan circuit)</b>							
120V 50/60Hz Standard	0.87	1.07	1.30	104	128	156	
230V 50/60Hz Export	0.45	0.56	0.68	104	128	156	
<b>Minimum Circuit Ampacity</b>							
120V 60Hz Standard	1.69	1.89	2.12				
120V 50Hz Standard	1.83	2.03	2.26				
230V 60Hz Export	0.95	1.06	1.18				
230V 50Hz Export	1.01	1.12	1.24				
120V 60Hz Energy Efficient	1.31	1.51	1.74				
230V 60Hz Energy Efficient	0.77	0.88	1.00				
<b>Maximum Over Current Protection 120V</b>	<b>20</b>	<b>20</b>	<b>20</b>				
Maximum Over Current Protection 230V	15	15	15				
<b>Return Glass Anti-sweat Heaters</b>							
120V 50/60Hz Standard	0.08	0.11	0.11	9	13	13	
230V 50/60Hz Export	0.04	0.06	0.06	9	13	13	
<b>Discharge Glass Anti-sweat Heaters</b>							
120V 50/60Hz Standard	0.46	0.66	0.66	55	79	79	
230V 50/60Hz Export	0.24	0.34	0.34	55	79	79	
<b>208V Electric Defrost</b>	<b>7.69</b>	<b>9.61</b>	<b>11.54</b>	<b>1600</b>	<b>2000</b>	<b>2400</b>	
<b>230V Export Electric Defrost</b>	<b>6.96</b>	<b>8.70</b>	<b>10.43</b>	<b>1600</b>	<b>2000</b>	<b>2400</b>	
<b>120V Koolgas Defrost</b>	<b>1.67</b>	<b>2.50</b>	<b>3.33</b>	<b>200</b>	<b>300</b>	<b>400</b>	

**Standard Lighting**

None

**Product Data**

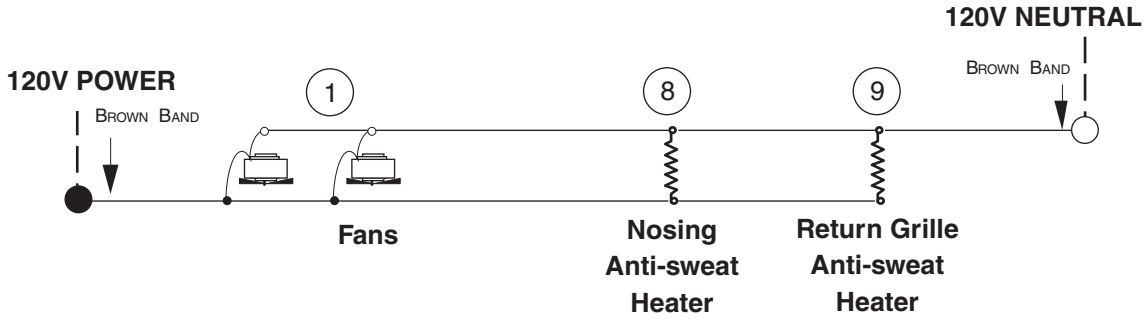
<i>ARI Refrigerated Volume</i> <sup>1</sup> (Cu Ft/Ft)	3.54 ft <sup>3</sup> /ft (0.33 m <sup>3</sup> /m)
<i>Recommended Usable Cube</i> <sup>2</sup> (Cu Ft/Ft)	3.69 ft <sup>3</sup> /ft (0.34 m <sup>3</sup> /m)
<i>ARI Total Display Area</i> <sup>3</sup> (Sq Ft/Ft)	2.78 ft <sup>2</sup> /ft (0.85 m <sup>2</sup> /m)
<i>Shelf Area</i> <sup>4</sup> (Sq Ft/Ft)	2.79 ft <sup>2</sup> /ft (0.85 m <sup>2</sup> /m)

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

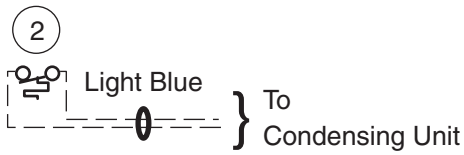
<b>ESTIMATED SHIPPING WEIGHT <sup>5</sup></b>					
<b>Case</b>	<i>4 ft</i>	<i>6 ft</i>	<i>8 ft</i>	<i>12 ft</i>	<b>Solid End</b>
					<i>(each)</i>
<b>lb (kg)</b>	600 (272)	800 (363)	1000 (454)	1200 (544)	50 (23)

<sup>5</sup> Actual weights will vary according to optional kits included.

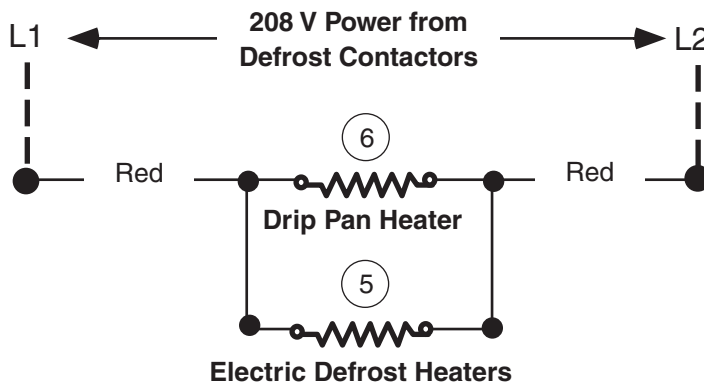
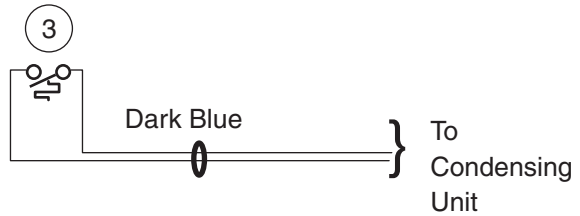
# Electric Defrost – Standard



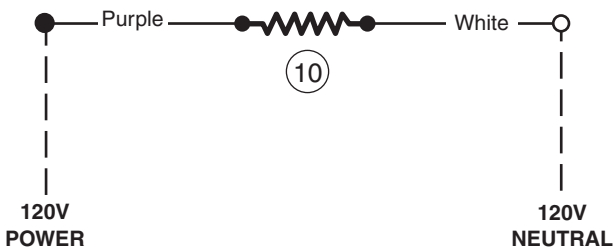
## Refrigeration Thermostat (Optional)



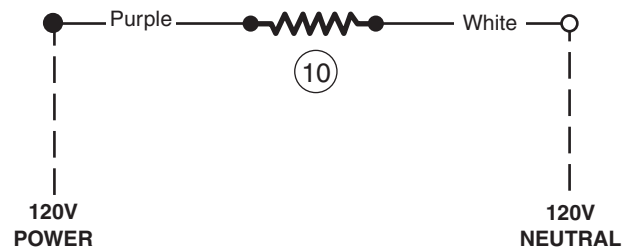
## Defrost Termination Thermostat



## Return Glass Anti-sweat Heater



## Discharge Glass Anti-sweat Heater



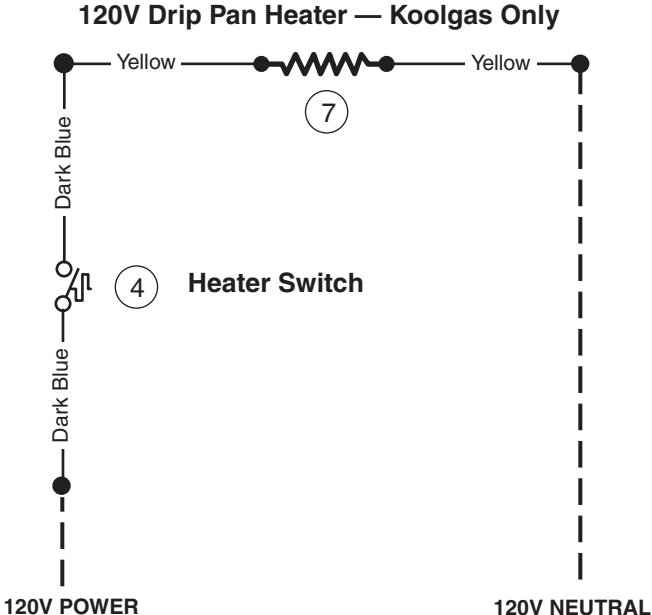
## WARNING

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.

# Gas Defrost – Optional



### WARNING

All components must have mechanical ground, and the merchandiser must be grounded.  
Circled Numbers = Parts List Item Numbers.