

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</b>			
A.	<b>4W</b> Standard Fan Assembly		(1)	E.	208V Evaporator Defrost Heaters		(5)
	0392457	Fan Motor, Evaporator (MO.4410101)			0481864	4 ft case (HE.4850637)	
	0464847	Fan Blade (FB.4780649)			0444057	6 ft case (HE.4850620)	
	<b>4W</b> Energy Efficient Fan Assembly		(1)		0462159	8 ft case (HE.4850603)	
	0477653	Fan Motor, Evaporator (MO.4410544)			0444058	12 ft case (HE.4850571)	
	0464847	Fan Blade (FB.4780649)		F.	208V Drip Pan Defrost Heaters, Electric		(6)
B.	Optional Adjustable Refrigeration Thermostat		(2)		0481865	4 ft case (HE.4850638)	
C.	0398557	Defrost Termination Thermostat (Electric Defrost only) (CT.4440611)	(3)		0444300	6 ft case (HE.4850609)	
D.	0481370	Heater Switch (Koolgas Defrost only) (CT.4440738)	(4)		0462160	8 ft case (HE.4850636)	
					0444296	12 ft case (HE.4850572)	
					120V Drip Pan Defrost Heaters, Koolgas		(7)
					0488967	4 ft case (HE.4850641)	
					0465906	6 ft case (HE.4850628)	
					0465907	8 ft case (HE.4850622)	
					0465908	12 ft case (HE.4850623)	
				G.	Nosing Anti-sweat Heaters		(8)
					0495009	4 ft case (HE.4880687)	
					0495006	6 ft case (HE.4850684)	
					0495007	8 ft case (HE.4850685)	
					0495008	12 ft case (HE.4850686)	

Note: Revision F adds 4 ft model



# Engineering Plan Views

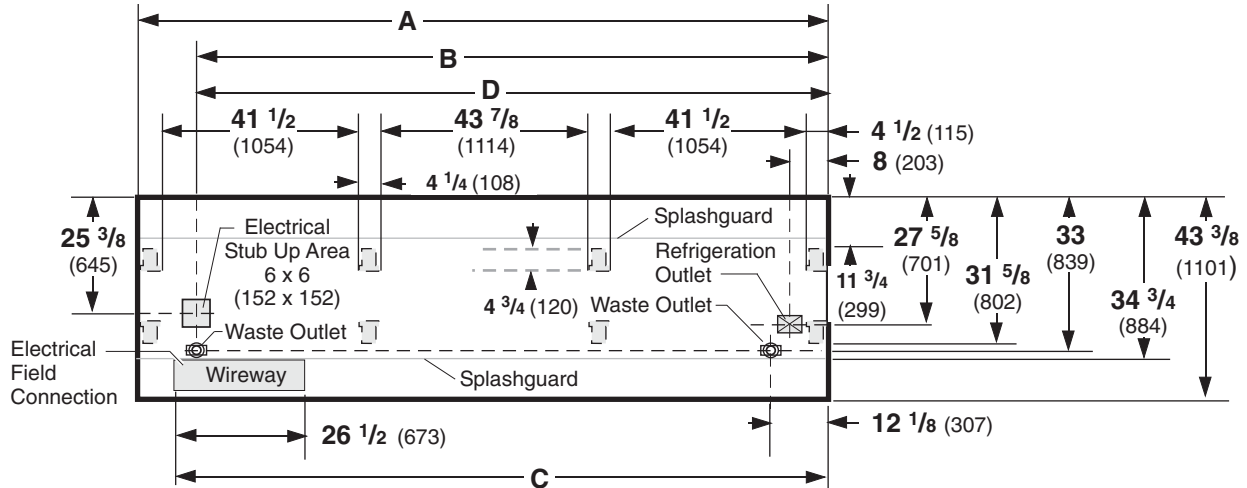
## PHYSICAL DATA

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

### Low / Medium Temperature





07-2009

Dimensions shown as inches & (mm).



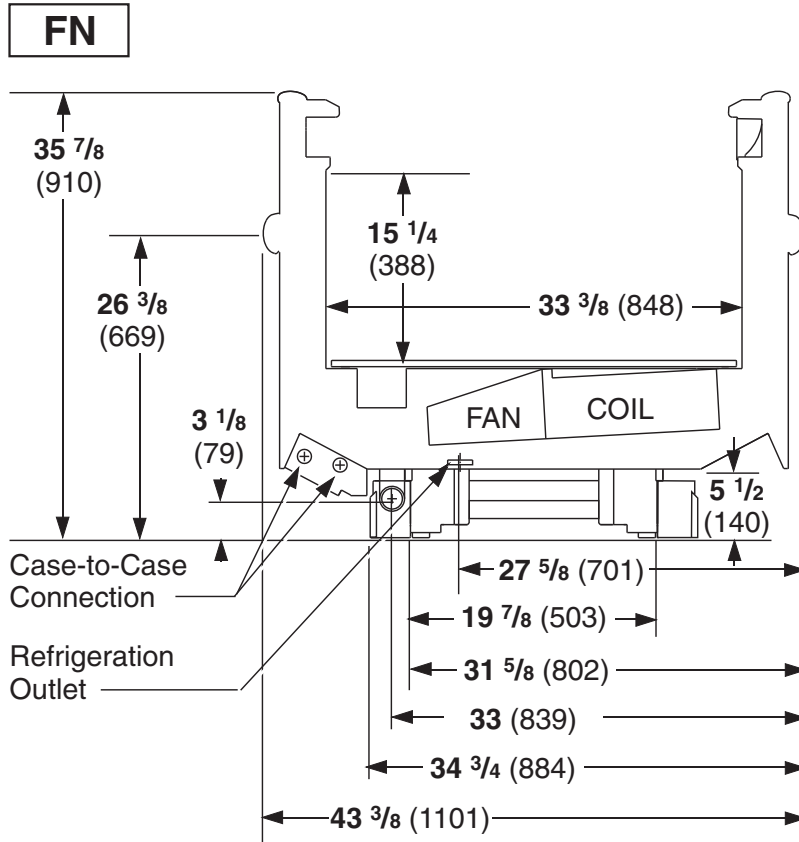
**NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.**

FRONT

	4 ft	6 ft	8 ft	12 ft
<b>General</b>				
<b>(A)</b> Case Length ( <i>without ends or partitions</i> )	48 1/4 (1226)	73 3/4 (1873)	96 3/8 (2448)	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)	43 3/8 (1101)
Back of case to front of splashguard	34 3/4 (884)	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)	31 5/8 (802)
Distance between edges of external legs and center legs	NA	30 1/4 (768)	41 1/2 (1054)	41 1/2 (1054)
Distance between edges of center legs	NA	NA	NA	43 7/8 (1114)
Distance between front legs and splashguard	3 1/8 (82)	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)</b> RH End of case to center of stub up area	36 1/8 (9018)	61 5/8 (1565)	84 1/4 (2141)	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)	25 3/8 (645)
Length of electrical wireway 	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
<b>(C)</b> RH End of case to LH end of wireway	40 1/2 (1029)	67 1/2 (1715)	90 1/8 (2289)	138 1/4 (3511)
<b>Waste Outlets</b> ( <i>One each end</i> ) 				
<b>(D)</b> RH End of case to the center of LH waste outlet	36 1/8 (918)	61 5/8 (1565)	84 1/4 (2141)	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)	12 1/8 (307)
Back O/S of case to center of waste outlets	33 (839)	33 (839)	33 (839)	33 (839)
Schedule 40 PVC drip pipe	1 1/4 (32)	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)	27 5/8 (701)
RH end of case to center of refrigeration outlet	8 (203)	15 (381)	8 (203)	8 (203)

**Impact Excel FN**  
**Low / Medium Temperature**

Dimensions shown as inches & (mm).



**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

<i>Btu/hr/ft<sup>2</sup></i>	MED	FF	IC
<b>Parallel</b>	280	390	400
<b>Conventional</b>	290	405	415

<sup>‡</sup>Optional energy efficient motors reduce the refrigeration load by 9 Btu/hr/ft.

**DEFROST DATA**

	MED	FF	IC
<b>Frequency (hr)</b>	24	24	24
<b>Defrost Water (lb/ft/day)</b>	0.8	0.75	0.6

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

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

<i>GAS</i>	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.

<b>Estimated Charge **</b>	<b>FN</b>		
<b>4 ft</b>	1.0 lb	16 oz	0.5 kg
<b>6 ft</b>	1.5 lb	24 oz	0.7 kg
<b>8 ft</b>	2.0 lb	32 oz	0.9 kg
<b>12 ft</b>	3.0 lb	48 oz	1.4 kg

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

**NSF Certification**

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

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

	<b>4 ft</b>	<b>6 ft</b>	<b>8 ft</b>	<b>12 ft</b>						
<b>Number of Fans – 4W Evaporator</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>						
		<b>Amperes</b>					<b>Watts</b>			
	<b>4 ft</b>	<b>6 ft</b>	<b>8 ft</b>	<b>12 ft</b>	<b>4 ft</b>	<b>6 ft</b>	<b>8 ft</b>	<b>12 ft</b>		
<b>Evaporator Fans</b>										
120V 60Hz Standard	0.31	0.31	0.62	0.62	24	24	48	48		
120V 50Hz Standard	0.38	0.38	0.76	0.76	27	27	54	54		
230V 60Hz Export	0.15	0.15	0.30	0.30	24	24	48	48		
230V 50Hz Export	0.18	0.18	0.36	0.36	27	27	54	54		
120V 60Hz Energy Efficient	0.12	0.12	0.24	0.24	8	8	16	16		
230V 60Hz Energy Efficient	0.06	0.06	0.12	0.12	8	8	16	16		
<b>Anti-sweat Heaters (on fan circuit)</b>										
120V 50/60Hz Standard	0.33	0.50	0.67	1.00	40	60	80	120		
230V 50/60Hz Export	0.18	0.26	0.35	0.52	40	60	80	120		
<b>Minimum Circuit Ampacity</b>										
120V 60Hz Standard	0.84	1.01	1.49	1.82						
120V 50Hz Standard	0.76	1.08	1.63	1.96						
230V 60Hz Export	0.68	0.61	0.85	1.02						
230V 50Hz Export	0.56	0.64	0.91	1.08						
120V 60Hz Energy Efficient	0.65	0.82	1.11	1.44						
230V 60Hz Energy Efficient	0.44	0.52	0.67	0.84						
<b>Maximum Over Current Protection 120V</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>						
Maximum Over Current Protection 230V	15	15	15	15						
<b>208V Electric Defrost</b>	4.4	6.54	7.69	11.54	910	1360	1600	2400		
<b>230V Export Electric Defrost</b>	3.8	5.91	6.96	10.43	800	1360	1600	2400		
<b>120V Koolgas Defrost</b>	0.92	1.33	1.67	3.33	110	160	200	400		
<b>Standard Lighting</b>										
None										

**Product Data**

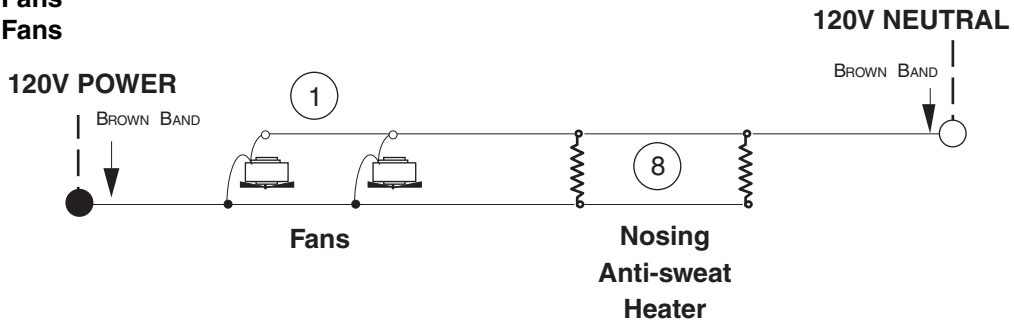
<i>Recommended Usable Cube</i> <sup>1</sup> (Cu Ft/Ft)	3.54 ft <sup>3</sup> /ft (0.33 m <sup>3</sup> /m)
<i>ARI Total Display Area</i> <sup>2</sup> (Sq Ft/Ft)	2.61 ft <sup>2</sup> /ft (0.80 m <sup>2</sup> /m)
<i>Shelf Area</i> <sup>3</sup> (Sq Ft/Ft)	2.78 ft <sup>2</sup> /ft (0.85 m <sup>2</sup> /m)

- <sup>1</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>2</sup> Computed using ARI 1200 standard methodology: Total Display Area, ft<sup>2</sup> [m<sup>2</sup>]/Unit of Length, ft [m]
- <sup>3</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.

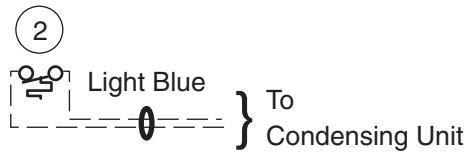
<b>ESTIMATED SHIPPING WEIGHT <sup>5</sup></b>					
<b>Case</b>	<i>4 ft</i>	<i>6 ft</i>	<i>8 ft</i>	<i>12 ft</i>	<b>Solid End</b>
					<i>(each)</i>
<b>lb (kg)</b>	600 (272)	800 (363)	1000 (454)	1200 (544)	50 (23)
<sup>5</sup> Actual weights will vary according to optional kits included.					

# Electric Defrost – Standard

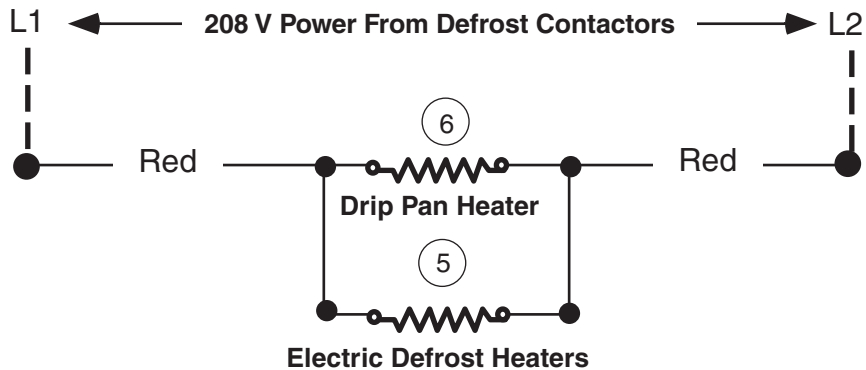
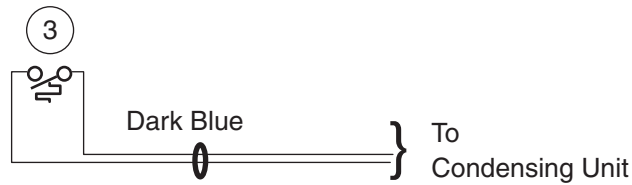
- 4 Ft – 1 Fan
- 6 Ft – 1 Fan
- 8 Ft – 2 Fans
- 12 Ft – 2 Fans



## Refrigeration Thermostat (Optional)



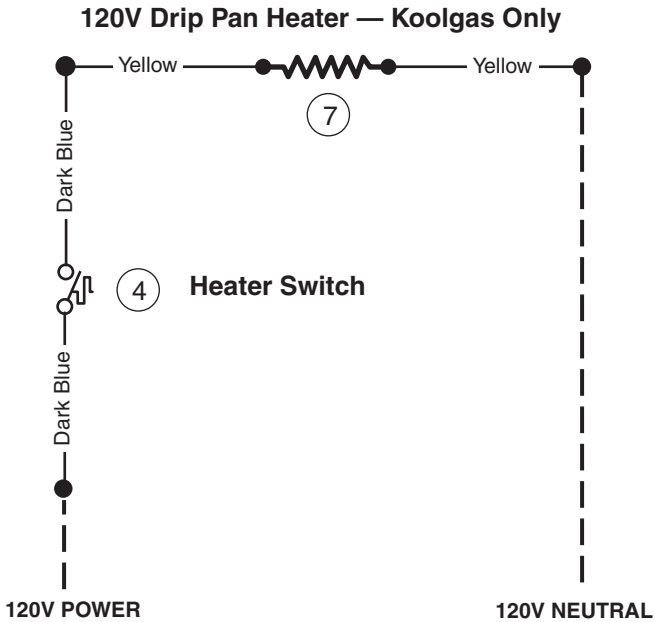
## Defrost Termination Thermostat



## WARNING

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

# Gas Defrost – Optional



### WARNING

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

