

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.	4W Standard Energy Efficient Fan Assembly	(1)	E.	208V Evaporator Defrost Heaters	(5)		
	0477653	Fan Motor, Evaporator (MO.4410544)		3016524	8 ft case (HE.4850603)		
	0464847	Fan Blade (FB.4780649)		3016527	12 ft case (HE.4850571)		
B.	Optional Adjustable Refrigeration Thermostat	(2)	F.	208V Drip Pan Defrost Heaters, Electric	(6)		
				0462160	8 ft case (HE.4850636)		
				0444296	12 ft case (HE.4850572)		
C.	0398557	Defrost Termination Thermostat (Electric Defrost only) (CT.4440611)	(3)				
					120V Drip Pan Defrost Heaters, Koolgas	(7)	
					0465907	8 ft case (HE.4850622)	
					0465908	12 ft case (HE.4850623)	
D.	0481370	Heater Switch (Koolgas Defrost only) (CT.4440738)	(4)	G.	Nosing Anti-sweat Heaters	(8)	
					0495007	8 ft case (HE.4850685)	
					0495008	12 ft case (HE.4850686)	

Data sheet-Excel-F

Note: Revision G: Added high glide refrigerant note. Other changes marked by bar, underline or circle.

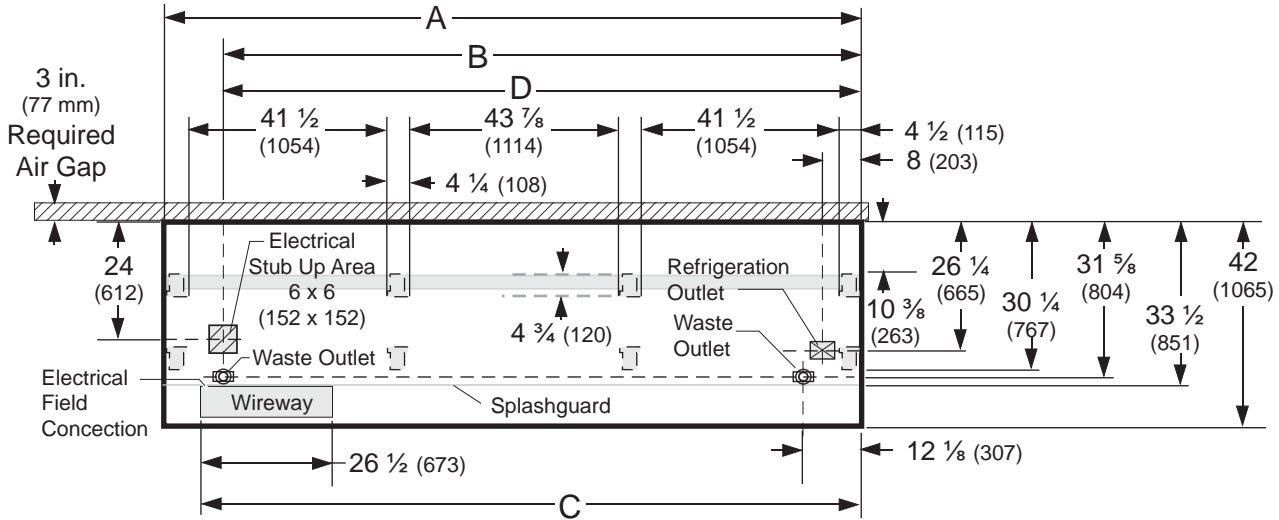
# Engineering Plan Views

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

Low / Medium Temperature

Dimensions shown as inches and (mm).

10-2004



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

	8 ft	12 ft
<b>General</b>		
<b>(A)</b> Case Length ( <i>without ends or partitions</i> ) (Each end and insulated partition adds 2 in. (51 mm) to case line up.) Maximum O/S dimension of case back to front ( <i>includes bumper</i> ) Back of case to front of splashguard Back of case to O/S edge of front leg Distance between edges of external legs and center legs Distance between edges of center legs Distance between front legs and splashguard	96 3/8 (2448) 42 (1065) 33 1/2 (851) 30 1/4 (767) 41 1/2 (1054) NA 3 1/8 (82)	144 1/2 (3670) 42 (1065) 33 1/2 (851) 30 1/4 (767) 41 1/2 (1054) 43 7/8 (1114) 3 1/8 (82)
<b>Electrical Service</b> <input checked="" type="checkbox"/> ( <i>Electrical Field Wiring connection point</i> )		
<b>(B)</b> RH End of case to center of stub up area Back of case to center of stub up area Length of electrical wireway <span style="border: 1px solid black; padding: 2px;">Wireway</span>	84 1/4 (2140) 24 (612) 26 1/2 (673)	132 3/8 (3363) 24 (612) 26 1/2 (673)
<b>(C)</b> RH End of case to LH end of wireway	90 1/8 (2289)	138 1/4 (3511)
<b>Waste Outlets</b> ( <i>One each end</i> ) <input checked="" type="checkbox"/>		
<b>(D)</b> RH End of case to the center of LH waste outlet RH End of case to the center of RH waste outlet Back O/S of case to center of waste outlets Schedule 40 PVC drip pipe	84 1/4 (2141) 12 1/8 (307) 31 5/8 (804) 1 1/4 (32)	132 3/8 (3363) 12 1/8 (307) 31 5/8 (804) 1 1/4 (32)
<b>Refrigeration Outlet</b> <input type="checkbox"/>		
Back of case to center of refrigeration outlet RH end of case to center of refrigeration outlet	26 1/4 (665) 8 (203)	26 1/4 (665) 8 (203)

# Single Level Wall Display with Solid Front



Hussmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2017 energy efficiency standards.

**Excel F**  
**Low / Medium Temperature**

## REFRIGERATION DATA<sup>§</sup>

**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>Btulhr/ft</i>	MED	FF	IC
<b>Parallel</b>	261	366	376
<b>Conventional</b>	271	381	391

<sup>§</sup> Average evaporator temperature shown. Use dew point for high glide refrigerants for unit sizing. Care should be taken to use the dew point in PT tables for measuring and adjusting superheat. Adjust evaporator pressure as needed to maintain discharge air temperature shown.

## DEFROST DATA

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

(± 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

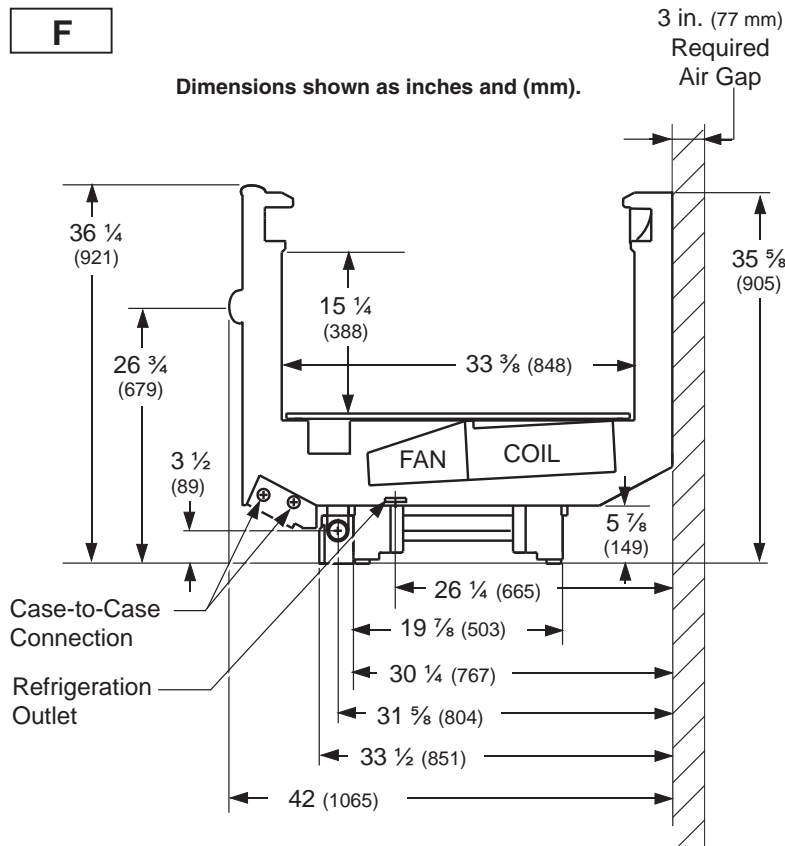
### Indoor Unit Only, Pressure Defrost Termination\*

Not Recommended

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

**F**

Dimensions shown as inches and (mm).



## Estimated Charge \*\*

8 ft	2.0 lb	32 oz	0.9 kg
12 ft	3.0 lb	48 oz	1.4 kg

\*\*This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately 0.5 lb (8 oz / 0.2 kg).

## NSF Certification

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

**Electrical Data**

			<b>8 ft</b>	<b>12 ft</b>		
<b>Number of Fans – 4W Evaporator</b>			<b>2</b>	<b>2</b>		
			<b>Amperes</b>		<b>Watts</b>	
			<b>8 ft</b>	<b>12 ft</b>	<b>8 ft</b>	<b>12 ft</b>
<b>Evaporator Fans</b>						
120V	50/60Hz	Standard Energy Efficient	0.24	0.24	16	16
230V	50/60Hz	Standard Energy Efficient	0.12	0.12	16	16
230V	60Hz	Export	0.30	0.30	48	48
230V	50Hz	Export	0.36	0.36	54	54
<b>Anti-sweat Heaters (on fan circuit)</b>						
120V	50/60Hz	Standard	0.67	1.00	80	120
230V	50/60Hz	Export	0.35	0.52	80	120
<b>Minimum Circuit Ampacity</b>						
120V	50/60Hz	Standard Energy Efficient	1.11	1.44		
230V	50/60Hz	Standard Energy Efficient	0.67	0.84		
230V	60Hz	Export	0.85	1.02		
230V	50Hz	Export	0.91	1.08		
<b>Maximum Over Current Protection 120V</b>			<b>20</b>	<b>20</b>		
Maximum Over Current Protection 230V			15	15		
<b>208V Electric Defrost</b>			7.69	11.54	1600	2400
<b>230V Export Electric Defrost</b>			6.96	10.43	1600	2400
<b>120V Koolgas Defrost</b>			1.67	3.33	200	400
<b>208V Koolgas Defrost</b>			0.96	1.92	200	400
<b>230V Koolgas Defrost</b>			1.06	2.12	244	488
<b>Standard Lighting</b>						
None						

**Product Data**

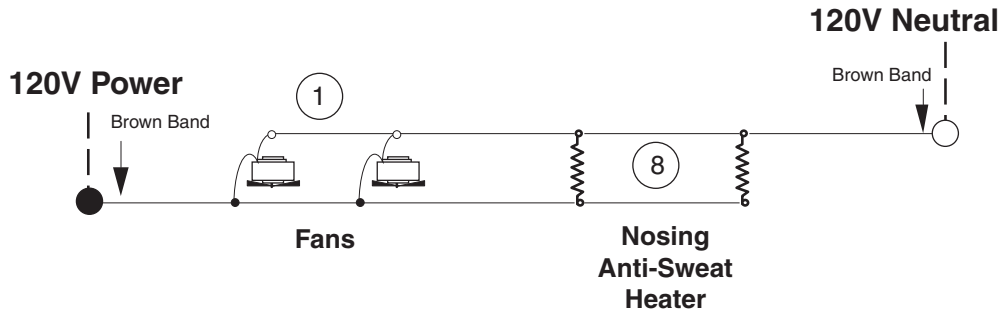
<i>Recommended Usable Cube</i> <sup>1</sup> ( <i>Cu FtlFt</i> )	3.55 ft <sup>3</sup> /ft (0.33 m <sup>3</sup> /m)
<i>AHRI Total Display Area</i> <sup>2</sup> ( <i>Sq FtlFt</i> )	2.60 ft <sup>2</sup> /ft (0.79 m <sup>2</sup> /m)
<i>Shelf Area</i> <sup>3</sup> ( <i>Sq FtlFt</i> )	2.79 ft <sup>2</sup> /ft (0.85 m <sup>2</sup> /m)

<sup>1</sup> AHRI 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 AHRI 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.

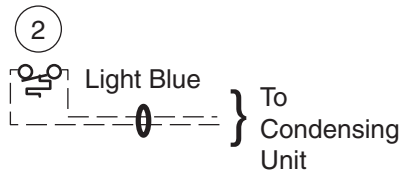
<b>ESTIMATED SHIPPING WEIGHT <sup>4</sup></b>					
<b>Case</b>					<b>Solid End</b>
	<i>4 ft</i>	<i>6 ft</i>	<i>8 ft</i>	<i>12 ft</i>	<i>(each)</i>
<b>lb (kg)</b>	NA (NA)	NA (NA)	1000 (454)	1200 (544)	50 (23)

<sup>4</sup> Actual weights will vary according to optional kits included.

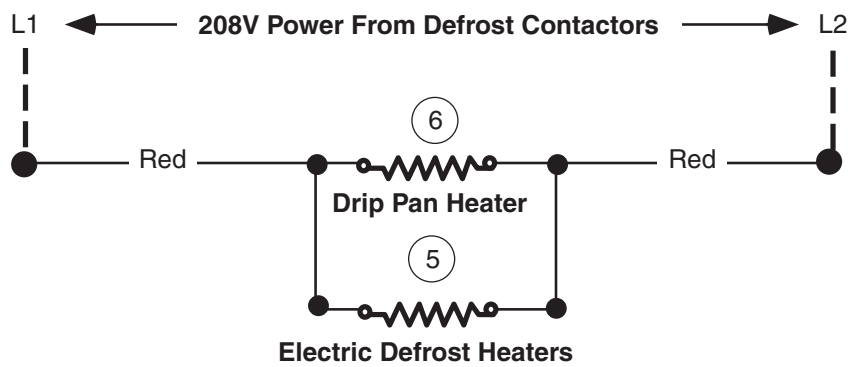
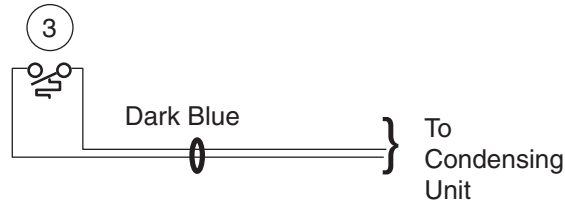
# Electric Defrost – Standard



## Refrigeration Thermostat (Optional)



## Defrost Termination Thermostat



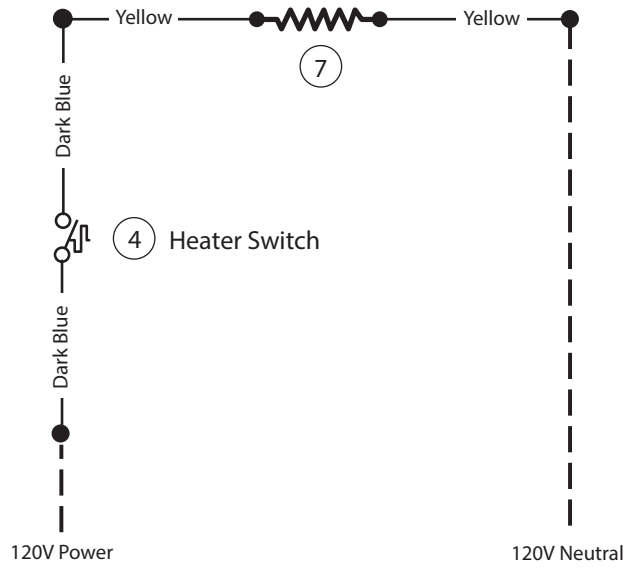
## WARNING

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

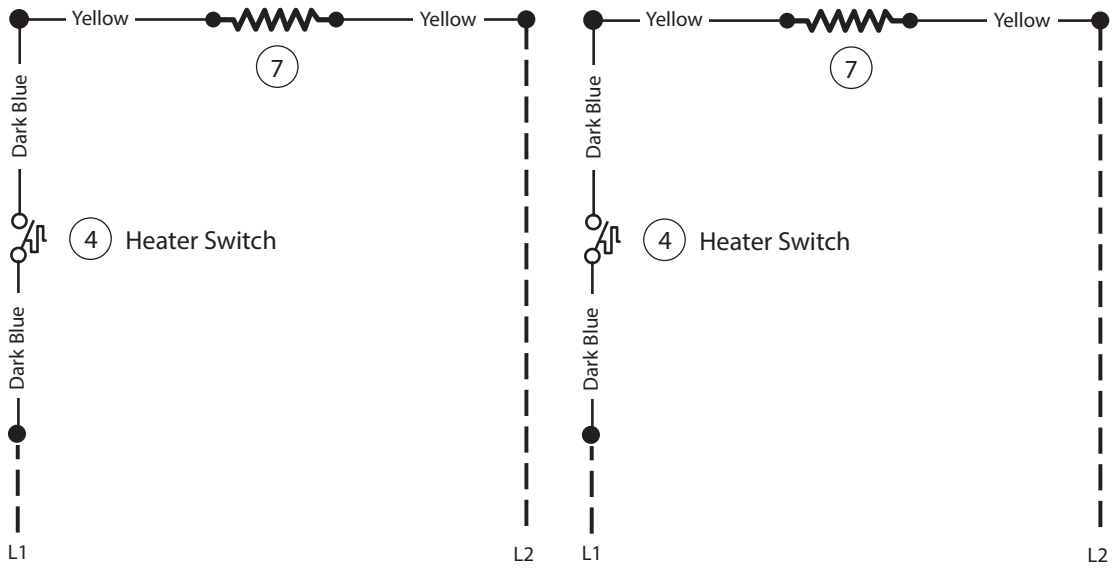
Circled Number = Parts List Item Numbers

# Gas Defrost – Optional

## 120V Drip Pan Heater — Koolgas Only



## 208V/230V Drip Pan Heater — Koolgas Only



### WARNING

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