

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 #
FAN ASSEMBLIES AND THERMOSTATS				LAMPS AND BALLASTS			
10 Ft, 12 Ft, 14 Ft & 16 Ft				C.	0459491	Ballast, Electronic Canopy (BA.4481566)	(3)
A.	12W Standard Energy Efficient Fan Assembly (1)			D.	Ballast, Electronic (4)		
	0477655	Fan Motor, Evaporator (MO.4410546)			0447739	Shelf Lamp (BA.4480900)	
	0142780	Fan Blade (FB.0142780) embossing toward motor			0466234	Shelf 2 lamps (BA.4480823)	
					0466235	Shelf 3 lamps (BA.4480901)	
B.	Optional Adjustable Refrigeration Thermostat (2)			E.	Fluorescent Lamp (5)		
	0448347	(CT.4481631)			<i>Replace with like fixtures</i>		

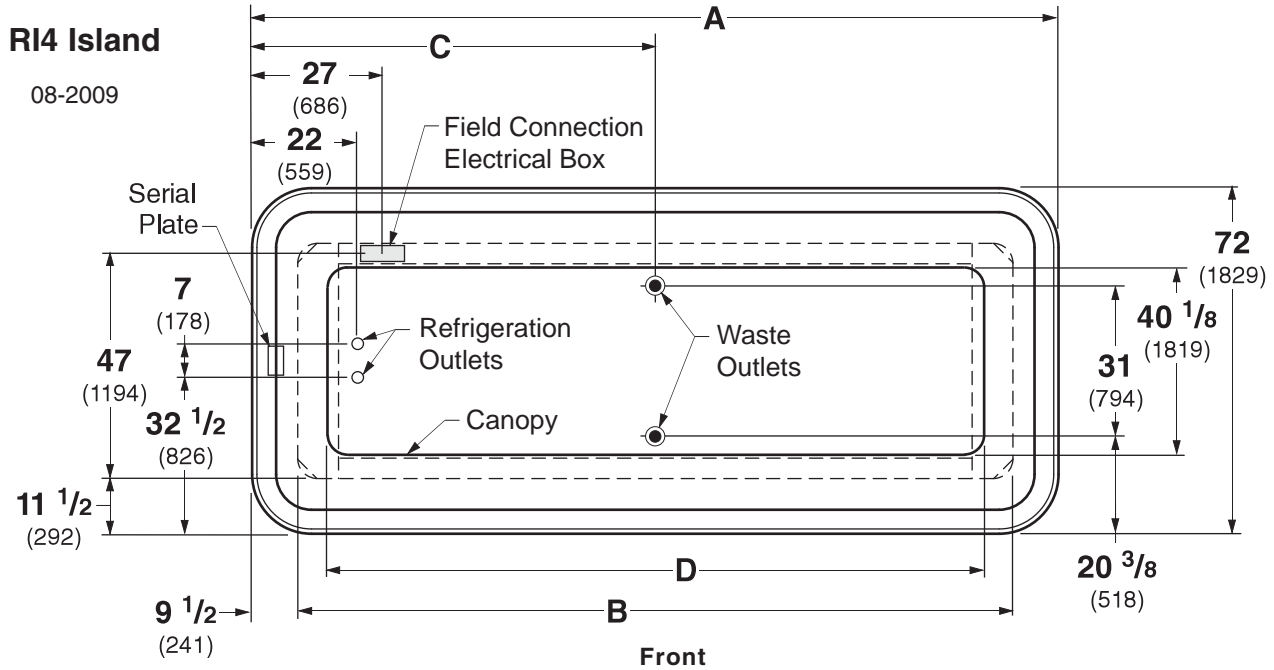
Note: Rev. G adds Ecoshine II LED lights for LED canopy. Other changes marked by bar, underline or circle.

Engineering Plan Views

Dimensions shown as inches and (mm).

PHYSICAL DATA

Merchandiser Drip Pipe (in.)	1 1/2
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	5/8



	10 ft	12 ft	14 ft	16 ft
General				
(A) Overall Case Length	120 (3048)	144 (3658)	168 (4267)	192 (4877)
(B) Base Length	101 (2565)	125 (3176)	149 (3786)	173 (4396)
Maximum O/S dimension of case back to front (<i>includes bumper</i>)	72 (1829)	72 (1829)	72 (1829)	72 (1829)
Front of splashguard to O/S edge of front base rail	1 5/8 (41)	1 5/8 (41)	1 5/8 (41)	1 5/8 (41)
Front of case to O/S edge of front base rail	13 1/8 (333)	13 1/8 (333)	13 1/8 (333)	13 1/8 (333)
Back of case to O/S edge of front base rail	58 7/8 (1495)	58 7/8 (1495)	58 7/8 (1495)	58 7/8 (1495)
Width of base rail	1 7/8 (48)	1 7/8 (48)	1 7/8 (48)	1 7/8 (48)
(D) Length of Canopy	88 3/8 (2245)	112 3/8 (2854)	136 3/8 (2245)	160 3/8 (4074)
Width of Canopy	40 1/8 (1019)	40 1/8 (1019)	40 1/8 (1019)	40 1/8 (1019)
Electrical Service (<i>Electrical Field Wiring connection point</i>)				
Center of Electrical service to O/S edge of front base rail	47 (1194)	47 (1194)	47 (1194)	47 (1194)
Left end of case to center of electrical box	27 (686)	27 (686)	27 (686)	27 (686)
Right end of case to center of electrical box	93 (2362)	117 (2972)	141 (3581)	165 (4191)
Waste Outlets				
(C) LH End of case to the center of waste outlet	42 (1067)	42 (1067)	84 (2134)	96 (2438)
Center of front waste outlet to outside of front base	8 7/8 (225)	8 7/8 (225)	8 7/8 (225)	8 7/8 (225)
Center of back waste outlet to outside of front base	40 1/8 (1019)	40 1/8 (1019)	40 1/8 (1019)	40 1/8 (1019)
Schedule 40 PVC drip pipe	1 1/2 (38)	1 1/2 (38)	1 1/2 (38)	1 1/2 (38)
Refrigeration Outlet				
LH end of case to center of refrigeration outlet	22 (559)	22 (559)	22 (559)	22 (559)
RH end of case to center of refrigeration outlet	98 (2489)	122 (3099)	146 (3708)	170 (4318)

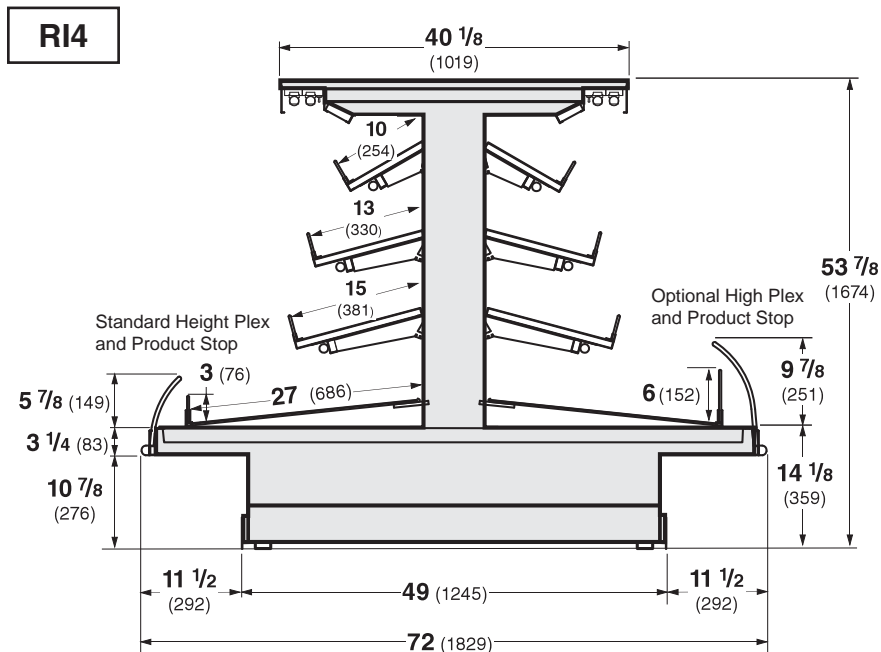
Multi-deck Island, 4 Display Levels

DOE 2012
Energy Efficiency
Compliant

Husmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2012 energy efficiency standards.

RI4
Delicatessen

Dimensions shown as inches and (mm).

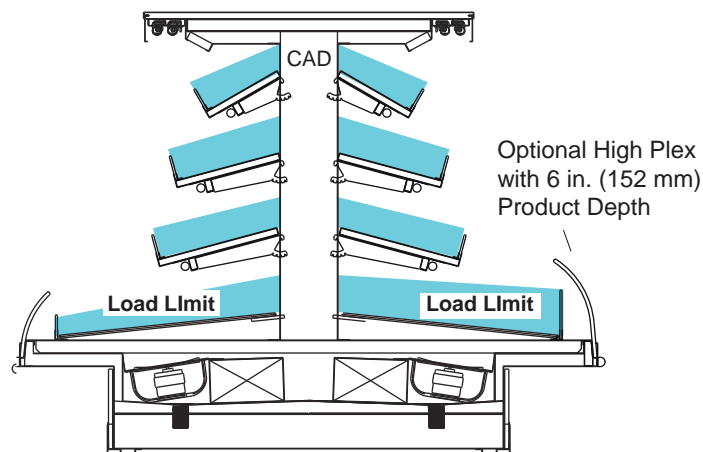


RI4

NSF Certification

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

Load Limit Profile



RI4

Cases may not function properly if they are loaded above load limits.

Air flow between the shelves, from the Center Air Discharge (CAD) to the return, must be maintained at all times for optimum operating efficiency and to prolong product shelf life. At no time should merchandisers be stocked beyond the load limits indicated.

REFRIGERATION DATA

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

	RI4
Discharge Air (°F)	27
Evaporator (°F)	20
Unit Sizing (°F)	18
Btu/hr/ft	
LIT & UNLIT SHELVES	RI4
Parallel	2205
Conventional	2413

DEFROST DATA

	RI4
Frequency (hr)	4
Defrost Water (lb/ft/day)	12
<i>(± 15% based on case configuration and product loading).</i>	

OFFTIME	RI4
Time Terminated (minutes)	20

ELECTRIC OR GAS Not Recommended

CONVENTIONAL CONTROLS

Low Pressure Backup Control	RI4
CI/CO*	14°F / 4°F
Indoor Unit Only, Pressure Defrost Termination*	48°F

*Use a Temperature Pressure Chart to determine PSIG conversions.

Estimated Charge **	RI4
10 ft	2.2 lb 35 oz 1.0 kg
12 ft	2.6 lb 42 oz 1.2 kg
14 ft	3.2 lb 51 oz 1.5 kg
16 ft	3.8 lb 61 oz 1.7 kg

**This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound (8 oz/0.2 kg).

RI4

Delicatessen

Electrical Data

	10 ft	12 ft	14 ft	16 ft				
Number of Fans – 12W	8	10	12	14				
	Amperes				Watts			
	10 ft	12 ft	14 ft	16 ft	10 ft	12 ft	14 ft	16 ft
Evaporator Fan								
120V 50/60Hz Standard Energy Efficient	2.40	3.00	3.60	4.20	144	180	216	252
230V 50/60Hz Standard Energy Efficient	NA	NA	NA	NA	NA	NA	NA	NA
230V 60Hz Export	NA	NA	NA	NA	NA	NA	NA	NA
230V 50Hz Export	NA	NA	NA	NA	NA	NA	NA	NA
Minimum Circuit Ampacity (MCA)								
120V 50/60Hz Standard Energy Efficient	2.60	3.20	3.80	4.40				
230V 50/60Hz Standard Energy Efficient	NA	NA	NA	NA				
230V 60Hz Export	NA	NA	NA	NA				
230V 50Hz Export	NA	NA	NA	NA				
Maximum Over Current Protection 120V	20	20	20	20				
Maximum Over Current Protection 230V	NA	NA	NA	NA				

ONLY LIGHTING CONFIGURATIONS THAT ARE COMPLIANT WITH THE U.S. DEPT. OF ENERGY (DOE) 2012 REGULATION ARE AVAILABLE FOR SALE FOR USE IN THE U.S.A.

Standard Lighting

2 Rows of Canopy	2.10	2.57	3.03	4.20	384	296	468	768
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Shelf Lighting

1 Row of Shelves	1.10	1.35	1.65	1.88	132	162	198	226
2 Rows of Shelves	2.20	2.70	3.30	3.76	264	324	396	452
3 Rows of Shelves	3.30	4.05	4.95	5.65	396	486	594	678

Optional Lighting

1 Row of Ledge	2.00	2.33	2.67	3.00	240	280	320	360
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Ecoshine II LED Lighting

LED Canopy

Ecoshine II Plus		1.09		1.43		125		165
Ecoshine II Plus HO		1.30		1.76		149.6		202

LED Shelves

3 Rows of Shelves		1.05		1.51		121.2		174
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115V Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting

Product Data

RI410

Recommended Usable Cube ¹ (Cu Ft/Case)	66.58 ft ³ /case (1.89 m ³ /case)
AHRI Total Display Area ² (Sq Ft/Case)	78.60 ft ² /case (7.30 m ² /case)
Shelf Area ³ (Sq Ft/Case)	108.30 ft ² /case (10.06 m ² /case)

RI412

Recommended Usable Cube ¹ (Cu Ft/Case)	79.90 ft ³ /case 2.26 m ³ /case)
AHRI Total Display Area ² (Sq Ft/Case)	94.32 ft ² /case (8.76 m ² /case)
Shelf Area ³ (Sq Ft/Case)	129.96 ft ² /case (12.07 m ² /case)

RI414

Recommended Usable Cube ¹ (Cu Ft/Case)	93.21 ft ³ /case (2.64 m ³ /case)
AHRI Total Display Area ² (Sq Ft/Case)	110.04 ft ² /case (10.22 m ² /case)
Shelf Area ³ (Sq Ft/Case)	151.62 ft ² /case (14.09 m ² /case)

RI416

Recommended Usable Cube ¹ (Cu Ft/Case)	106.53 ft ³ /case (3.02 m ³ /case)
AHRI Total Display Area ² (Sq Ft/Case)	125.76 ft ² /case (11.68 m ² /case)
Shelf Area ³ (Sq Ft/Case)	173.28 ft ² /case (16.10 m ² /case)

- ¹ AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume / Unit of Length, ft³/ft [m³/m]
- ² Computed using AHRI 1200 standard methodology: Total Display Area, ft² [m²] / Unit of Length, ft [m]
- ³ 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 10-inch shelf, (1) row of 13-inch shelf and (1) row of 15-inch shelf.

ESTIMATED SHIPPING WEIGHT ⁴

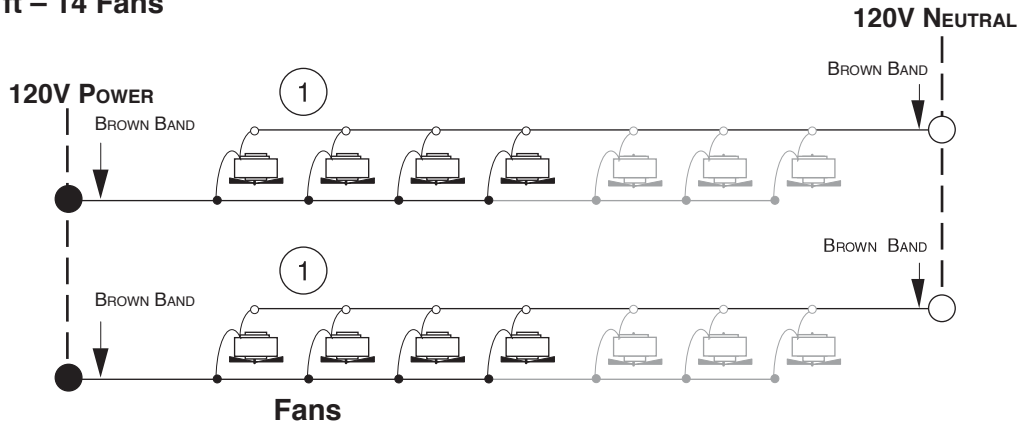
Case	10 ft	12 ft	14 ft	16 ft	End
lb (kg)	1600 (726)	1800 (816)	2000 (907)	2200 (998)	NA

⁴ Actual weights will vary according to optional kits included.

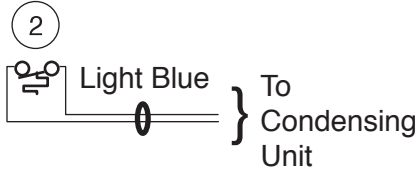
Fan Wiring Offtime Defrost

8, 10, 12, and 14 Fans

- 10 ft – 8 Fans
- 12 ft – 10 Fans
- 14 ft – 12 Fans
- 16 ft – 14 Fans



Refrigeration Thermostat



WARNING

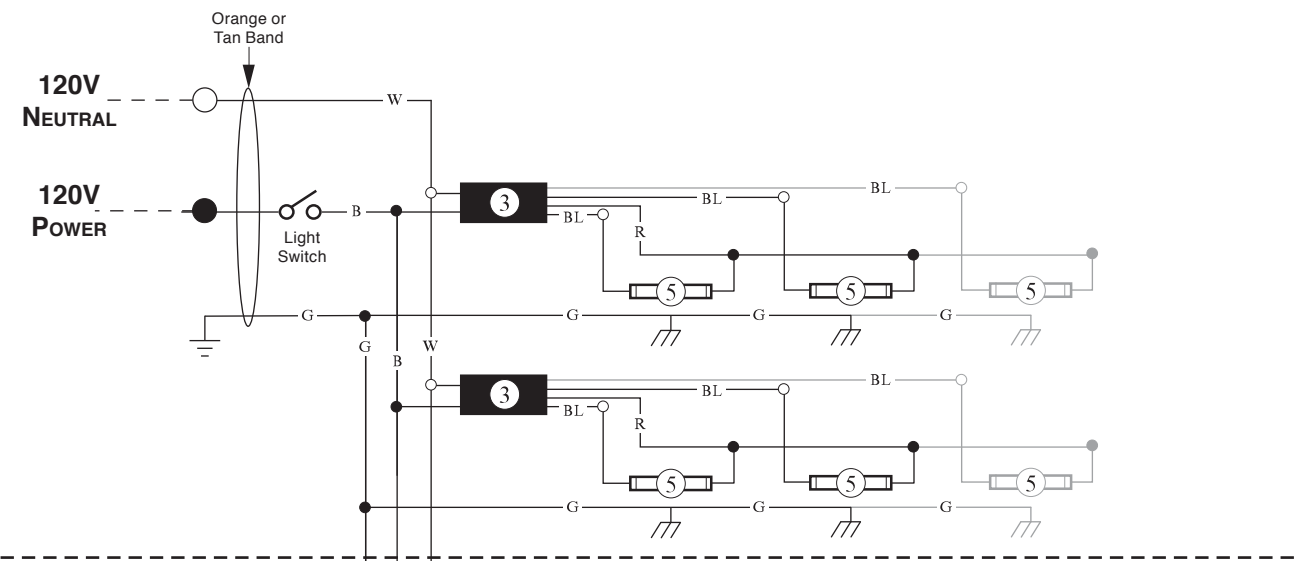
All components must have mechanical ground, and the merchandiser must be grounded.

Circled numbers = Parts list Item Numbers

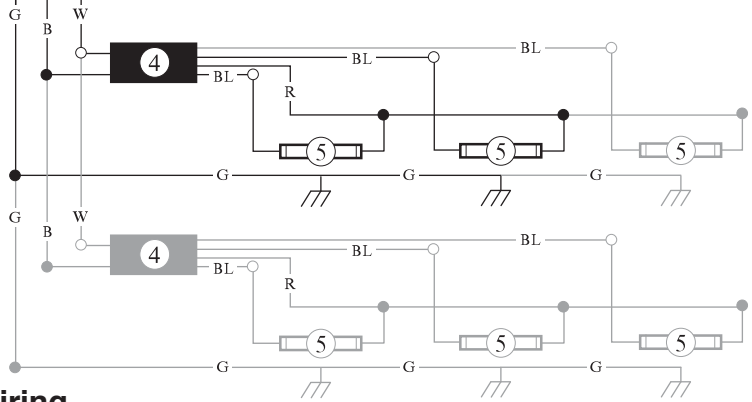
R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

● = 120V Power ○ = 120V Neutral ⊥ = Field Ground ≡ = Case Ground

Standard Lighting — 1 Row Canopy

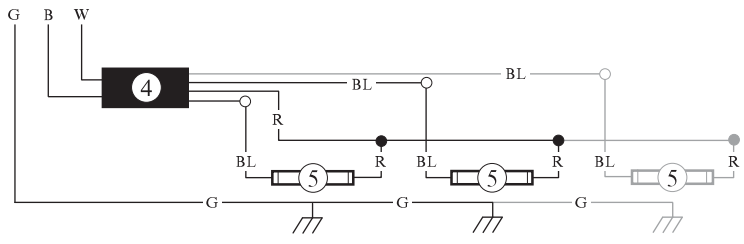


Lighted Shelf Wiring



Typical Shelf Ballast Wiring
 Maximum lamps per ballast is three (3).
 Different shelf configurations and different case lengths will have more lamp ballasts.

Optional Ledge Light Circuit



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 BK = Black W = White
 ● = 120V Power ○ = 120V Neutral ⏏ = Field Ground ⏏ = Case Ground