# HUSSMAnn<sup>®</sup> Excel

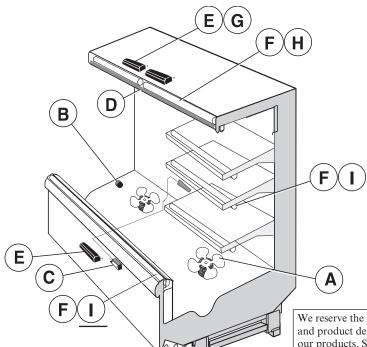
# C2XEC-XE

Technical Data Sheet P/N 0489566\_J

**NSF®** Certified

October 2016

DOE 2012
Energy Efficiency
Compliant



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 Ite	em#	Item	Part #	Description	Wiring It	em#
FAN A	ASSEMBLIES				Lamp	S & BALLAST	S		
4 Ft, 8 Ft & 12 Ft					E.	Ballast, Ele	ectronic		(5)
A.	7W Standard	<b>Energy Efficient F</b>	an Assembly	(1)		0480130	2 lamps (BA.44)	31676)	` /
	0477654	Fan Motor, Evar	•	. ,		0480131	3 lamps (BA.44)	/	
		(MO.4410545)				0480132	4 lamps (BA.44)	/	
	0142780	Fan Blade (FB.01	42780)		F.		Fluorescent La		(6)
		`	,				Replace with like	*	. /
THER	MOSTATS						1	J	
В.	0411744	Standard Non-ac	ljustable	(2)	LED	FIXTURES AN	D POWER SUPPLY		
		Defrost Thermos		( )	G.	0501213	Power Supply (	EP.4481861)	(7)
		(CT.0411744)			Н.		LED Canopy F	,	(8)
C.	Optional Adi	ustable Refrigerati	on Thermosta	t (3)			Replace with like		· /
	1 3	Č		( )	I.		LED Shelf Fixt	U	(9)
НЕАТ	ERS						Replace with like		(- )
D.		Canopy Anti-Sv	veat Heater	(4)			<i>T</i>	<i>J</i>	
	0512499	4 ft (HE.485117		( )	NOTE	: For LED ligh	nting parts contact you	r Hussmann sei	vice
	0512502	8 ft (HE.485117	/				00-922-1919. Please ho		
	0512503	12 ft (HE.48511	/		-		ble. Descriptions inclu	•	
		(-121.0011	,				NN.COM/SERVICEAND	_	

Data sheet-Excel-C2XEC-XE

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

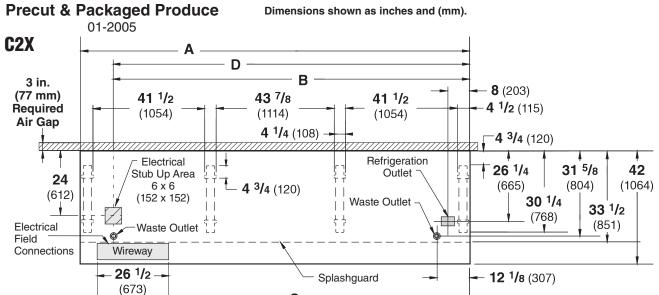
# **Engineering**

# **Plan Views**

PHYSICAL DATA Merchandiser Drip Pipe (in.)

 $1^{1/4}$ Merchandiser Liquid Line (in.) 3/8 Merchandiser Suction Line (in.) 7/8

# Dairy/Delicatessen



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

**FRONT** 

C

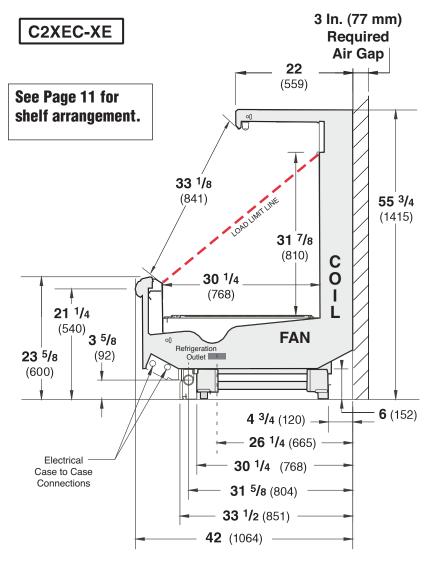
	4 ft	8 ft	12 ft
General			
(A) Case Length (without ends or partitions)	48 3/8 (1229)	96 <sup>3</sup> / <sub>8</sub> (2448)	144 1/2 (3670)
(Each end and insulated partition adds $1^{-1}/2$ in. (38 mm) to case line up.)			
Maximum O/S dimension of case back to front			
(includes bumper)	42 (1064)	42 (1064)	42 (1064)
Back of case to front of splashguard	33 1/2 (851)	33 <sup>1</sup> / <sub>2</sub> (851)	33 1/2 (851)
Back of case to O/S edge of front leg	30 1/4 (768)	30 1/4 (768)	30 1/4 (768)
Distance between edges of external legs and center legs	NA	41 1/2 (1054)	41 1/2 (1054)
Distance between edges of center legs	NA	NA	43 7/8 (1114)
Distance between front legs and splashguard	2 3/4 (70)	2 3/4 (70)	2 3/4 (70)
Electrical Service (Electrical Field Wiring connection point)			
<b>(B)</b> RH End of case to center of stub up area	36 1/4 (921)	84 1/4 (2140)	132 3/8 (3363)
Back of case to center of stub up area	24 (612)	24 (612)	24 (612)
Length of electrical wireway Wireway	26 1/2 (673)	26 1/2 (673)	26 1/2 (673)
(C) RH End of case to LH end of wireway	42 1/8 (1070)	90 1/8 (2289)	138 1/4 (3511)
Waste Outlets (One each end)			
(D) RH End of case to the center of LH waste outlet	36 1/4 (921)	84 1/4 (2140)	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	31 5/8 (804)	31 5/8 (804)	31 5/8 (804)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)	1 1/4 (32)
Refrigeration Outlet			
Back of case to center of refrigeration outlet	26 1/4 (665)	26 1/4 (665)	26 1/4 (665)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)	8 (203)

Dimensions shown as inches and (mm).

# Excel C2XEC-XE

#### Dairy/Delicatessen

#### **Precut & Packaged Produce**



#### **NSF Certification**

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

<b>Estimated Cl</b>	harge**	C2X	EC-XE
4 ft	1.2	19 oz	0.5 kg
8 ft	2.3	37 oz	1.0 kg
12 ft	3.3	53 oz	1.5 kg

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

#### REFRIGERATION DATA

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

	C2XEC-XE§
Discharge Air °F	29
Evaporator °F	21
Unit Sizing °F	19

§ 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.

Btu/hr/ft — Unlit Shelves ‡

C2XEC-XE <sup>‡</sup>	Parallel	Conventional
Unlit		
4 ft/8 ft/12 ft	1059	1134

<sup>‡</sup> Add 10 Btu/hr/ft *per shelf row* for LED fixtures. Add 20 Btu/hr/ft *per shelf row* for fluorescent lamps.

#### **DEFROST DATA**

C2XEC-XE
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Frequency (hr) 6
Defrost Water (lb/ft/day) 7

( $\pm 15\%$  based on case configuration and product loading.)

OFFTIME	C2XEC-XE
Temp Term °F	48°F
Failsafe Minutes	30

ELECTRIC OR GAS Not Recommended

#### **Standard Defrost Thermostat**

Close on rise: close 48°F – open 33°F

#### **CONVENTIONAL CONTROLS**

**Low Pressure Backup Control** 

C2XEC-XE

**CI/CO\*** 17°F / 7°F

Indoor Unit Only, Pressure Defrost Termination\* 48°

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

# Excel C2XEC-XE

## Dairy/Delicatessen

## **Precut & Packaged Produce**

Hilactrical	Llata
<b>Electrical</b>	Data

Number of Fans—7W		4 ft 1	8 ft 2	12 ft 3				
Number of Pans—/ W			2	3				
			Amperes			Watts		
Evaporato	r Fan	4 ft	8 ft	12 ft	4 ft	8 ft	12 ft	
120V	50/60Hz Standard Energy Efficient	0.19	0.38	0.57	14	28	42	
230V	50/60Hz Standard Energy Efficient	0.10	0.20	0.30	14	28	42	
230V	60Hz Export	0.25	0.50	0.75	39	78	117	
230V	50Hz Export	0.28	0.56	0.84	42	84	126	
Minimum	Circuit Ampacity							
120V	50/60Hz Standard Energy Efficient	0.39	0.58	0.77				
230V	50/60Hz Standard Energy Efficient	0.30	0.40	0.50				
230V	60Hz Export	0.45	0.70	0.95				
230V	50Hz Export	0.48	0.76	1.04				
Maximum	Over Current Protection 120V	20	20	20				
	Over Current Protection 230V	15	15	15				
	. **							
Anti-swear 120V	50/60Hz Standard	0.10	0.20	0.30	12	24	36	
G( ) 1								
1 Row	Lighting (T-8 Fluorescent) Canopy	0.26	0.51	0.77	30	59	85	
	HITTHE CONFIGURATIONS THAT ARE COMPLIANT USE IN THE U.S.A.	ANT WITH T	HE U.S. D	EPT. OF ENER	RGY (DOE) 2012 REG	GULATION	ARE AVAILABL	E FOR
SALE FOR	USE IN THE U.S.A.							
-	Lighting (T-8 Fluorescent)							
	onal 1 Row Canopy	0.26	0.51	0.77	30	59	85	
	Rail Light	0.26	0.51	0.77	30	59	85	
3 Rows	of Shelves	0.77	1.53	2.31	59	177	255	
EcoShine	II Canopy							
1 Row	Canopy — EcoShine II	0.23	0.46	0.70	27.8	55.6	83.4	
1 Row 0	Canopy — EcoShine II HO	0.28	0.56	0.84	34.0	67.2	100.8	
EcoShine	II Rail Light —1 Row	0.09	0.17	0.26	10.2	20.5	30.7	

120V Fluorescent Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting 120V LED Lighting Circuit Total = Canopy Lighting + Shelf Lighting + Optional Rail Lighting 230V Lighting Circuit Total = Multiply 120V Lighting Circuit Total by 0.52

0.17

0.26

0.34

0.51

0.51

0.77

**EcoShine II Shelf** 2 Rows of Shelves

3 Rows of Shelves

40.9

61.4

61.4

92.1

20.5

30.7

 $<sup>\</sup>dagger$  MCA does not include Canopy A/S Heaters because heaters are wired separately from fans.

# Excel C2XEC-XE

Dairy/Delicatessen

**Precut & Packaged Produce** 

#### **Product Data**

Recommended Usable Cube <sup>1</sup> (Cu Ft/Ft) AHRI Total Display Area <sup>2</sup> (Sq Ft/Ft) Shelf Area <sup>3</sup> (Sq Ft/Ft) 3.85 ft<sup>3</sup>/ft (0.36 m<sup>3</sup>/m) 2.77 ft<sup>2</sup>/ft (0.84 m<sup>2</sup>/m) 6.54 ft<sup>2</sup>/ft (1.99 m<sup>2</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 (1) row of 12-inch shelf, (1) row of 14-inch shelf and (1) row of 16-inch shelf.

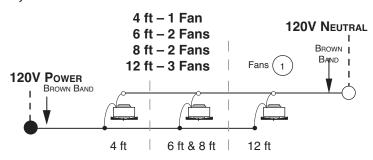
ESTIMATED SHIPPING WEIGHT 5				
Case				Solid End
	4 ft	8 ft	12 ft	(each)
<b>lb</b> ( <i>kg</i> )	600 (272)	1000 (454)	1200 (544)	75 (34)

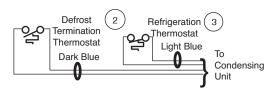
<sup>&</sup>lt;sup>1</sup> AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]

# Fan Wiring

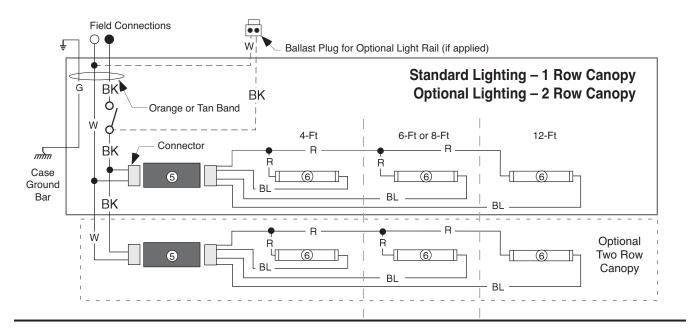
#### **Offtime Defrost**

#### 1, 2 & 3 Fans

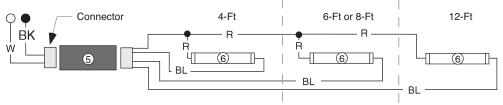




# **Canopy Light Circuits — Fluorescent Fixtures**



## Optional Lighting – 1 Row Rail



#### **WARNING**

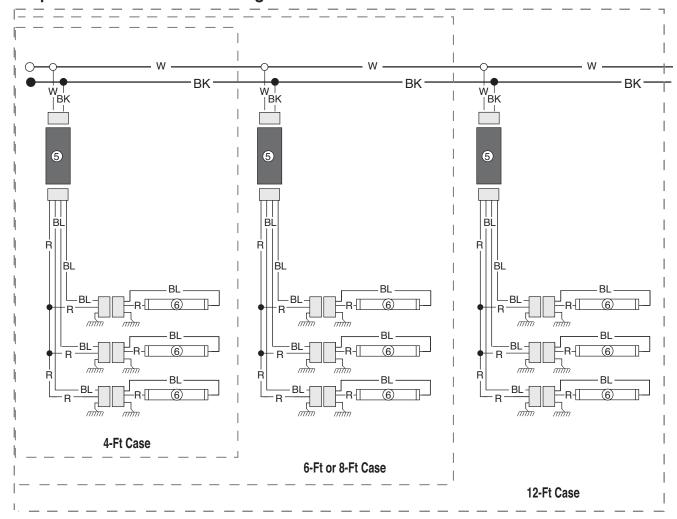
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red Y = Yellow G = Green BL = Blue BK = Black W = White  $\bullet$  = 120V Power  $\bigcirc$  = 120V Neutral  $\bot$  = Field Ground  $\overrightarrow{mm}$  = Case Ground

Optional Shelf Lighting Fluorescent Fixtures

## Optional Shelf Harness and Light Circuits for Three Rows of Shelves



#### **WARNING**

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

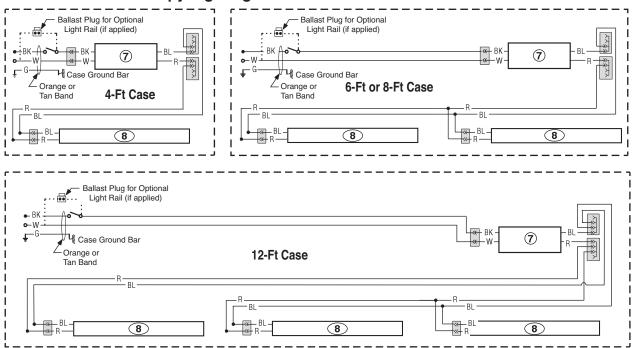
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R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

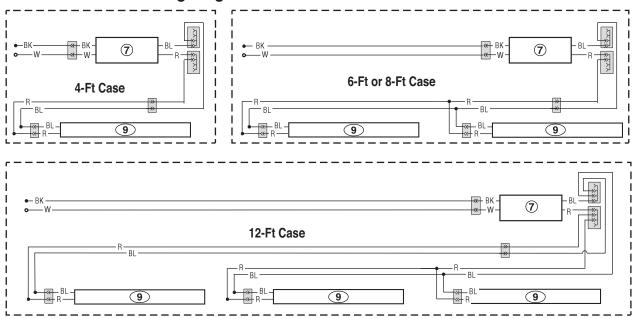
• = 120V Power  $\bigcirc$  = 120V Neutral  $\frac{1}{7}$  = Field Ground  $\frac{1}{1000}$  = Case Ground

# Optional Canopy and Rail Light Circuits — LED Fixtures

## EcoShine II LED Canopy Lighting - 1 Row



## EcoShine II LED Rail Lighting - 1 Row



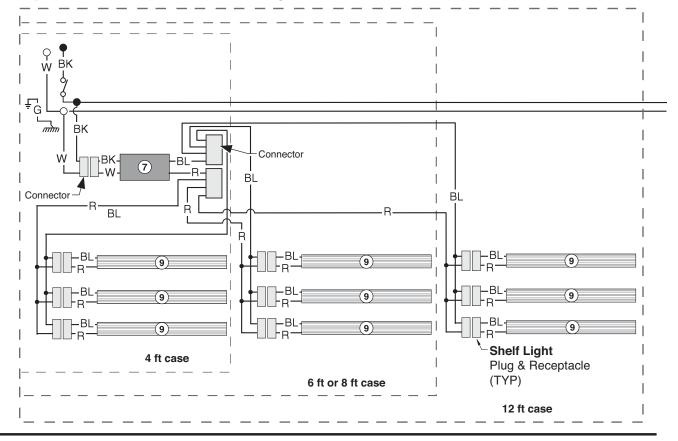
#### **WARNING**

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  $\bullet$  = 120V Power  $\bigcirc$  = 120V Neutral  $\bot$  = Field Ground  $\longrightarrow$  = Case Ground

## Optional Shelf Harness and LED Light Circuits for 2 or 3 Rows of Shelves



#### **WARNING**

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

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

• = 80V Power 
$$\bigcirc$$
 = 80V Neutral  $\bot$  = Field Ground  $\longrightarrow$  = Case Ground

# Impact Excel C2XEC-XE

Dairy/Delicatessen

**Precut & Packaged Produce** 

#### **SHELF CONFIGURATION**

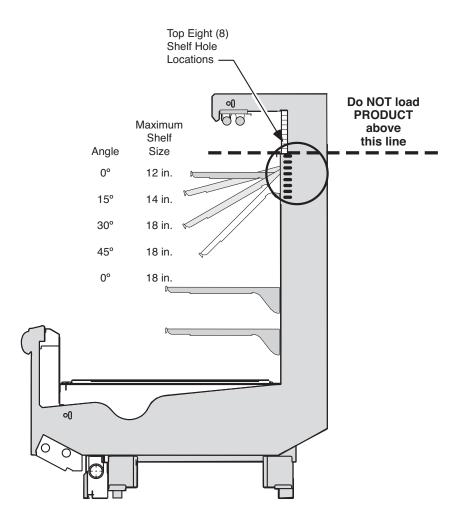
This merchandiser is designed for one or two shelves.

The depth of the shelf used in the top eight (8) shelf hole locations is critical to case performance.

If a shelf is placed in one of the top eight (8) locations it must comply with the angle/depth requirements listed below.

Shelf Angle	Maximum Shelf Depth
0°	12 in.
15 °	14 in. or less
30 °	18 in. or less
45 °	18 in. or less

**NOTE:** Shelves placed in the lower positions may be up to 18 in. deep when positioned at a 0 ° angle.



# Impact Excel C2XEC-XE Dairy/Delicatessen Precut & Packaged Produce

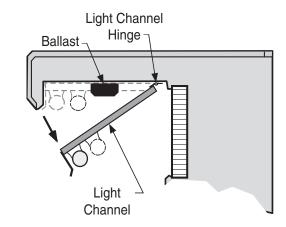
The ballast for the canopy and shelf lamps is located behind the canopy on the left-hand end (when facing case) of the merchandiser.

To access the ballast:

- 1. Remove screws at bottom edge of canopy and rear of light channel.
- Light Channel

  Remove Screws
- 2. Lower light channel which will pivot on hinge.
- 3. Service or replace ballasts as required.
- 4. Reassemble items as they were originally installed.

**NOTE**: Rail lamp ballast is located in the electrical raceway.



#### **CANOPY ANTI-SWEAT HEATER**

The canopy anti-sweat heater location is shown below. Connections are in the electrical wireway.

