



CASE DIVISION TECHNICAL REFERENCE MANUAL

ODS-1000



HILL PHOENIX®
DISPLAY CASES

OBSOLETE



Welcome to the **2010 Merchandisers Engineering Reference Manual**. This manual provides detailed cross-sections, footprints and technical data for all of our current production models.

The case data contained in this manual is organized into sections so that similar case models are grouped together (e.g. Multi-Deck merchandisers, Reach-In merchandisers, etc.). This makes it easier to find just the right case to fit your new or existing store layout.

The table of contents lists our cases by design application, giving you the ability to see which cases are available for specific functions. The index at the back of this manual lists the cases in alphabetical order, allowing you to find a specific case model at a glance. Additionally, the entire manual is posted in electronic format to our Web site at www.hillphoenix.com on the "**Technical Information Center**" page. Any revisions to the case data contained in this manual - as well as the technical specifications for any new cases that are released during 2010 - will also be posted to the Hill PHOENIX Web site on the "**Technical Information Center**" page.

If you have any questions or need more information about our display merchandisers, please contact one of our Sales Representatives toll-free at (800) 283-1109. Further contact information for our Colonial Heights facility is listed on the back cover of this manual and is also available on our Web site.

Thank you for choosing Hill PHOENIX for your product merchandising needs!

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EXCELLENCE
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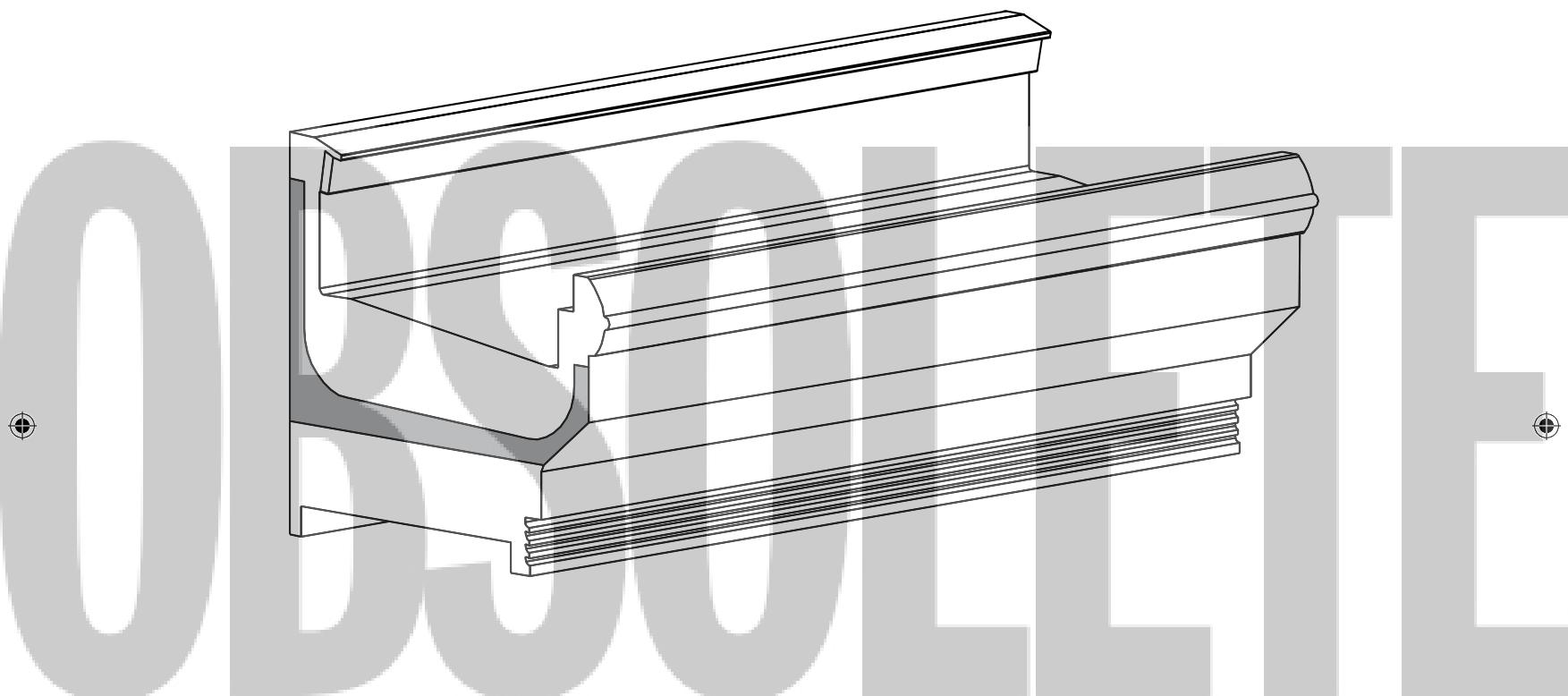
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SINGLE-DECK



NOTES

- Cases shown with an ANSI/NSF* mark are listed by NSF.
- Cases shown with a UL* mark are listed by Underwriters Laboratories Inc.
- Allow for an extra 1/8" per joint when lining up merchandisers.
- Technical information contained herein is subject to change without notice.

* ANSI - American National Standard Institute
NSF - National Sanitation Foundation
UL - Underwriters Laboratories Inc

Single-Deck Deli/Cheese Merchandiser

OC - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OC	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	2	1.00	60	0.15	9.2	0.25	30	3.85	800	4.44	1065
	12'	3	1.50	90	0.23	13.8	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
OC	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front Sill Heights	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ² Air Velocity (FPM)
OC	Standard	456	6-8	22	26	39	305
	All Others	391	6-8	22	26	35	305

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OC	3	6-8	40	49	70	47	26	45	40	45

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

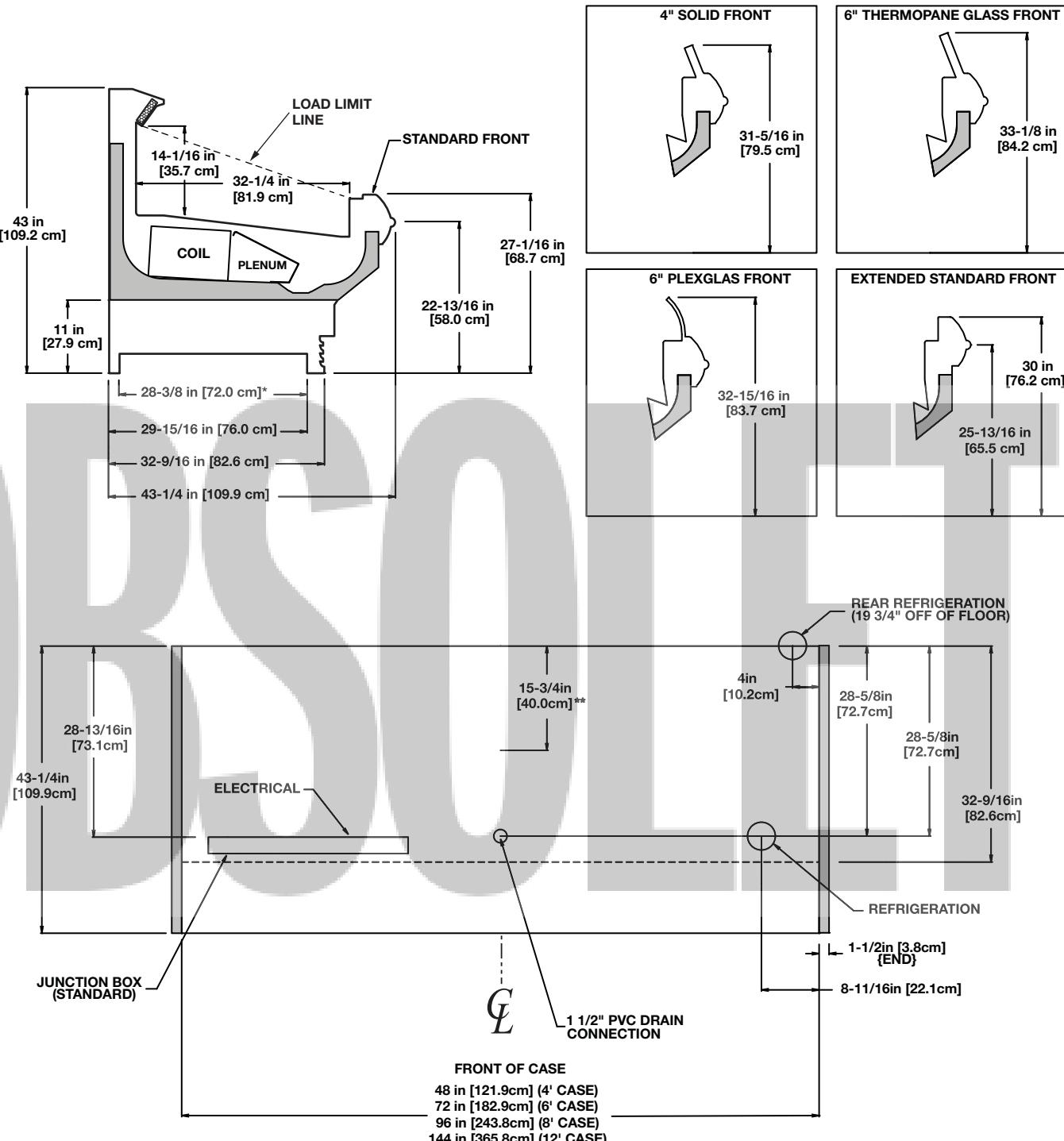
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY

SINGLE-DECK

Deli/Cheese



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAIN

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (4' & 6') - 1/2", SUCTION LINE (8' & 12') - 5/8", LIQUID LINE (ALL LENGTHS) - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Single-Deck Deli/Meat/Seafood Merchandiser with Synerg-E™

OM-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans		Anti-Condensate Heaters		
		120 Volts		120 Volts		
		Amps	Watts	Amps	Watts	
OM-NRG	4'	1	0.16	11	0.14	17
	6'	2	0.32	21	0.20	24
	8'	2	0.32	21	0.25	30
	12'	3	0.48	32	0.38	46

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
OM-NRG	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ² (°F)	Discharge ³ Air (°F)	Discharge ⁴ Air Velocity (FPM)
OM-NRG	315	6 - 8	26	32	165

Defrost Controls

Model	Defrosts per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OM-NRG	6	---	---	50	42	---	---	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.26.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

2 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

3 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

4 Average discharge air velocity at peak of defrost.

5 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

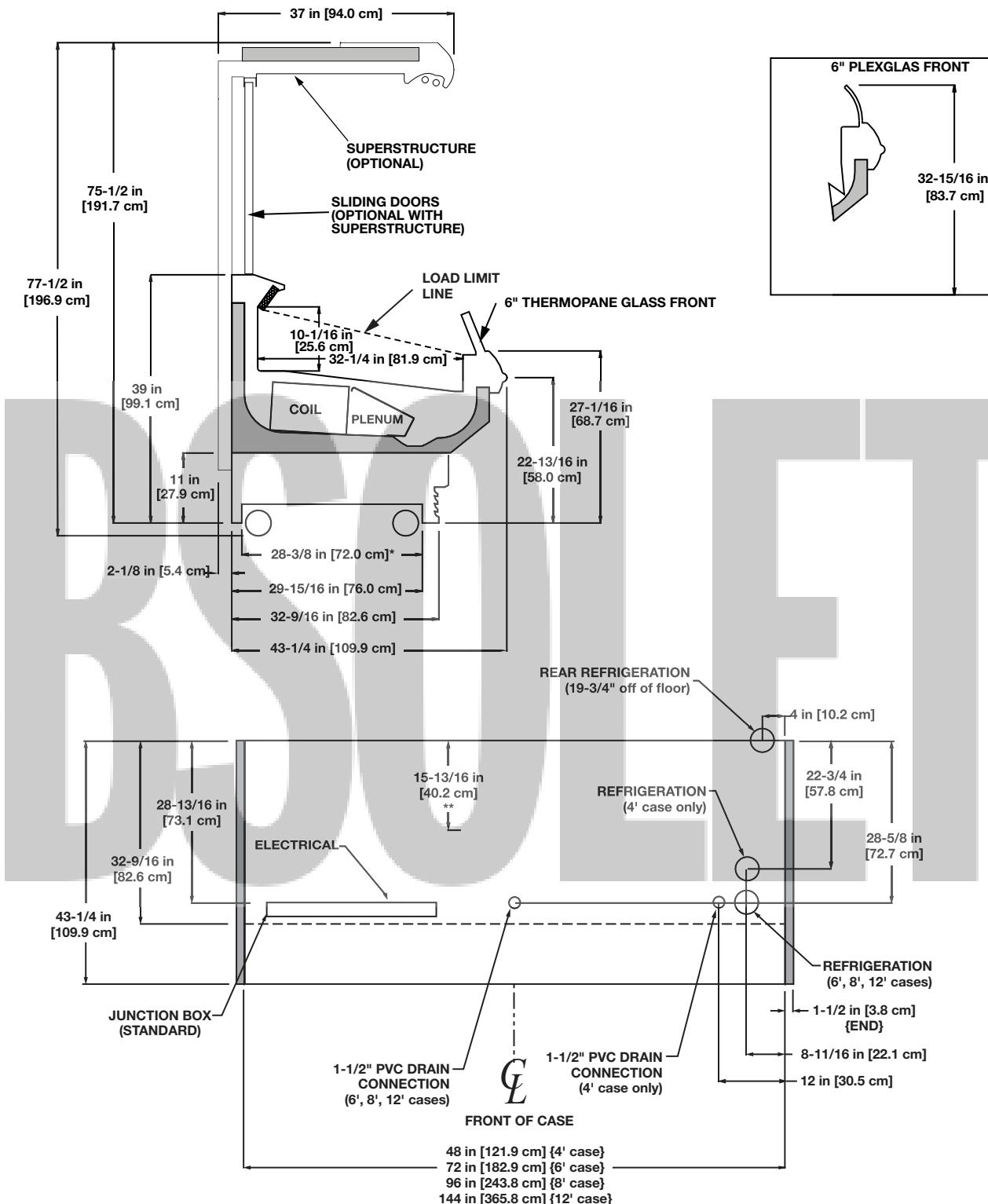
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY

SINGLE-DECK

Deli/Meat/Seafood



Single-Deck Frozen Meat Merchandiser

OMZ - 4', 6', 8' & 12'

Electrical Data

Model		Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
			120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
			Amps	Watts	Amps	Watts	Amps	Watts	Amps ¹	Watts	Amps ¹	Watts
OMZ	4'	2	1.00	60	0.23	14	0.60	72	3.33	1200	3.84	1596
	6'	2	1.00	60	0.23	14	0.90	108	5.00	1800	5.76	2394
	8'	2	1.00	60	0.23	14	0.96	115	6.66	2400	7.69	3195
	12'	3	1.50	90	0.35	21	1.83	220	7.99	2880	9.24	3840

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
OMZ	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
OMZ	526	3-5	-22	-10	0	220

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OMZ	4	13-15	45	47	---	---	20	60	---	---

1 NOTE: 3-phase load. Figures given in maximum amps per phase.

2 BTUH/ft notes:

- Listed BTUH/ft indicates parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.14.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

4 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

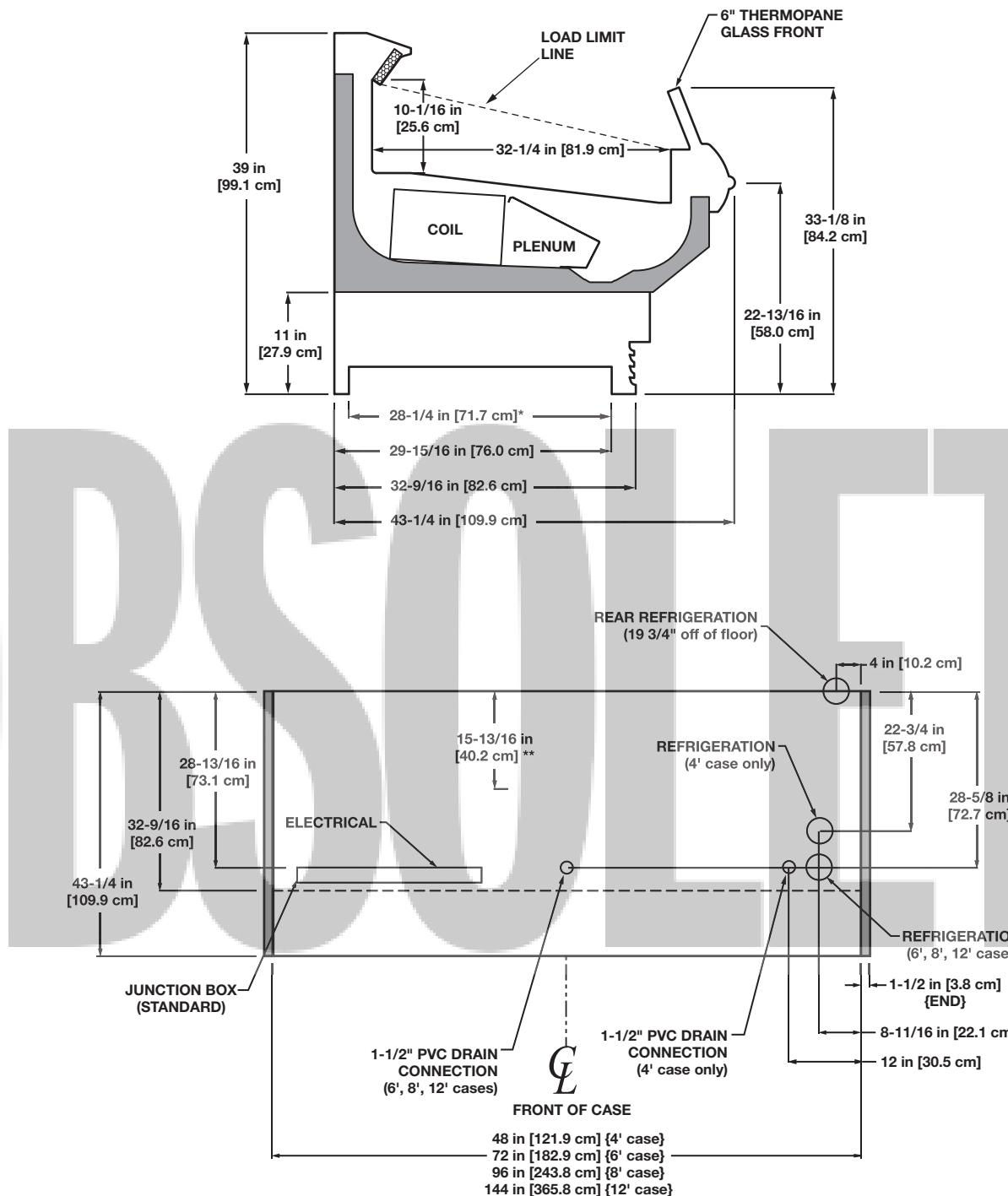
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE
A DOVER COMPANY

SINGLE-DECK

Frozen Meat

**NOTES:**

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE THE BASE RAIL BEHIND KICK-PLATE



Single-Deck Frozen Food/Ice Cream Merchandiser

OMZD - 4', 6', 8' & 12'

Electrical Data

Model		Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
			120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
			Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OMZD	4'	2	0.68	34	0.30	22	1.14	137	7.69	1600	8.88	2130
	6'	2	0.68	34	0.30	22	1.28	154	11.54	2400	13.31	3195
	8'	3	1.02	51	0.45	33	1.45	174	15.38	3200	17.76	4261
	12'	4	1.36	68	0.60	44	2.59	311	23.08	4803	26.64	6395

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
OMZD	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
OMZD-F ¹	424	3-5	-17	-8	2	240
OMZD-C ¹	444	3-5	-27	-18	-8	240

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OMZD	3	13-15	45	50	---	---	20	60	---	---

1 F=frozen food, C=ice cream.

2 BTUH/ft notes:

- Listed BTUH/ft indicates parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.03.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

4 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

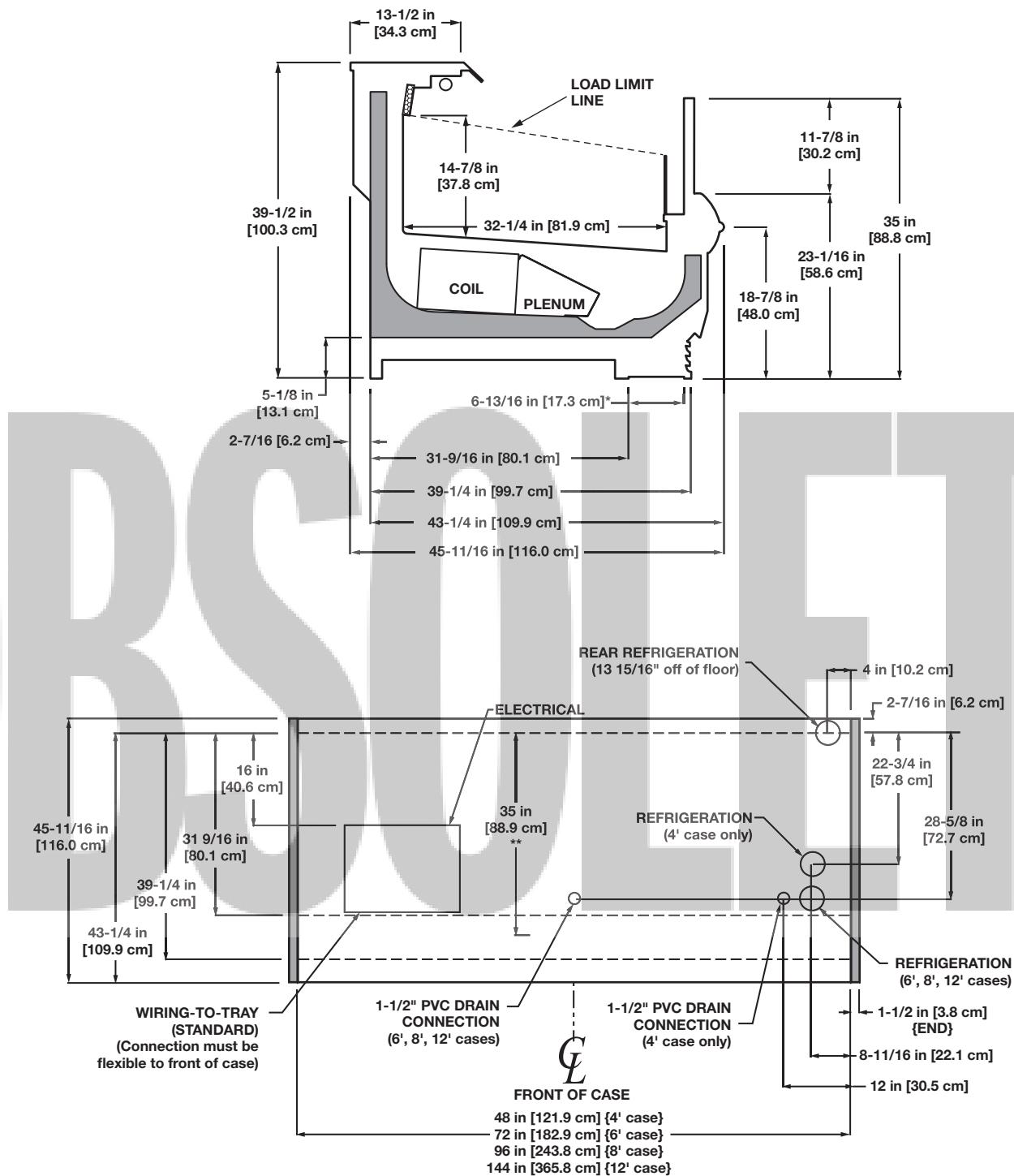
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY

SINGLE-DECK

Frozen Food/Ice Cream



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- SUCTION LINE (4') - 1/2", SUCTION LINE (6' & 8') - 5/8", SUCTION LINE (12') - 7/8"
- LIQUID LINE (ALL LENGTHS) - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE THE BASE RAIL BEHIND KICK-PLATE



Single-Deck Produce Merchandiser

OP - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OP	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	2	1.00	60	0.15	9.2	0.25	30	3.85	800	4.44	1065
	12'	3	1.50	90	0.23	13.8	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
OP	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Rear Sill Heights	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ² Air Velocity (FPM)
OP Cut Produce	39"	264	6-8	26	31	42	180
	43"	377	6-8	26	30	45	210
OP Bulk Produce	39"	206	6-8	29	36	44	180
	43"	350	6-8	29	35	47	210

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OP	2	6-8	40	49	60	47	26	45	40	45

1 BTUH/ft notes:

- Listed BTUH/ft indicates parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.06.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

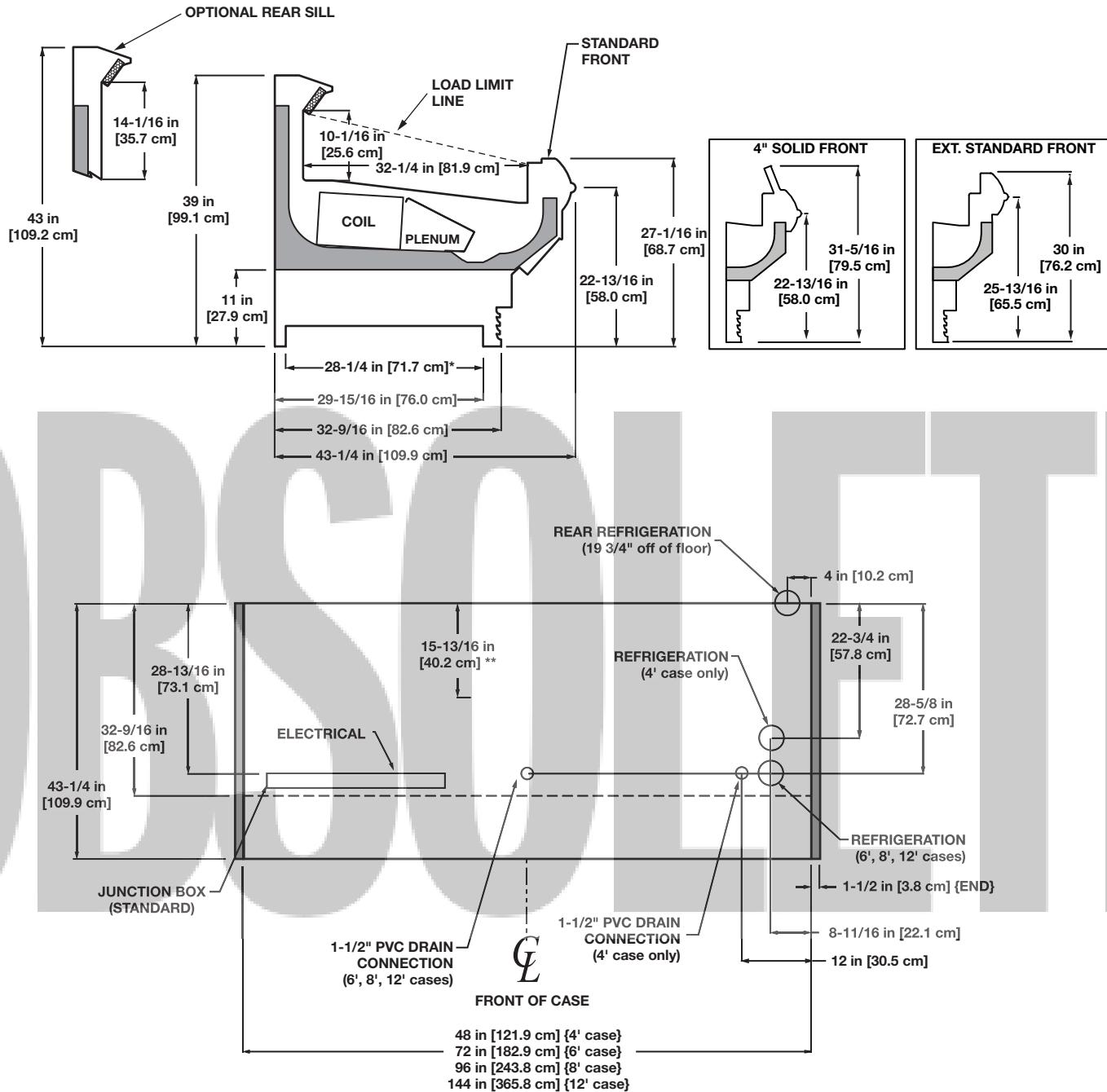
2 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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Wide Single-Deck Produce Merchandiser

OWP - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OWP	8'	2	1.00	60	0.15	9.2	0.25	30	3.85	800	4.44	1065
	12'	3	1.50	90	0.23	13.8	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)						
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)				
			120 Volts		120 Volts				
OWP	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Rear Sill Heights	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ² Air Velocity (FPM)
OWP Cut Produce	39"	353	6-8	26	31	42	180
	43"	501	6-8	26	30	45	210
OWP Bulk Produce	39"	277	6-8	29	36	44	180
	43"	466	6-8	29	35	47	210

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OWP	2	6-8	40	49	60	47	26	45	40	45

1 BTUH/ft notes:

- Listed BTUH/ft indicates parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.06.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

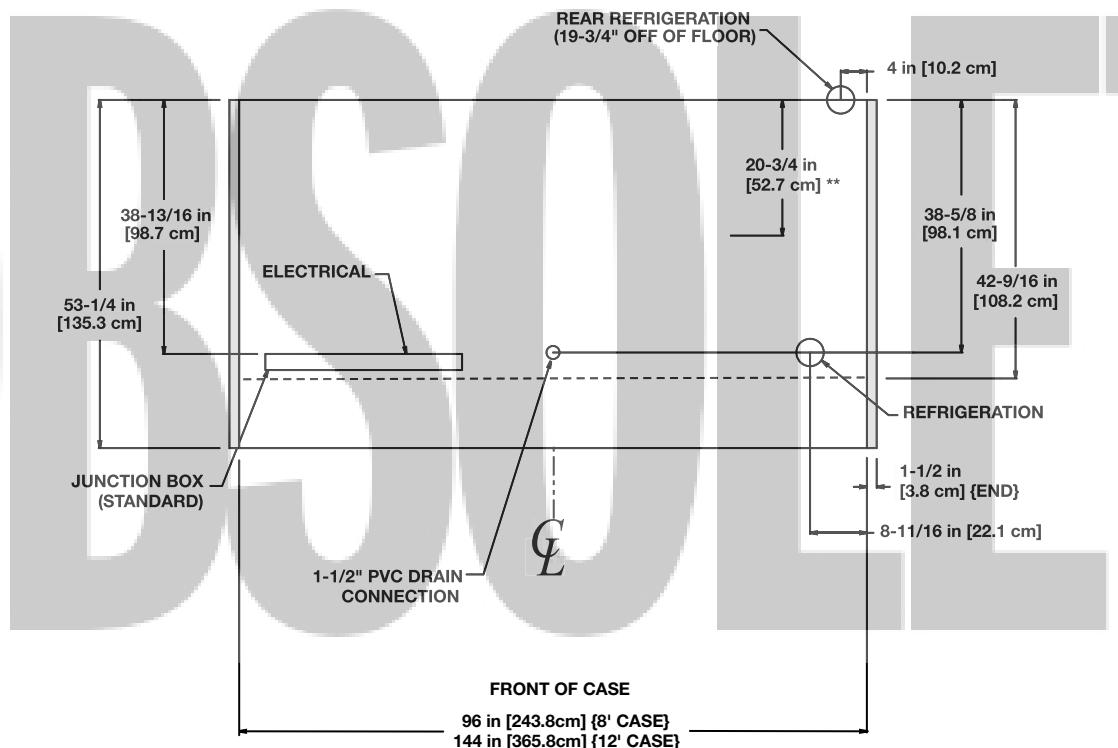
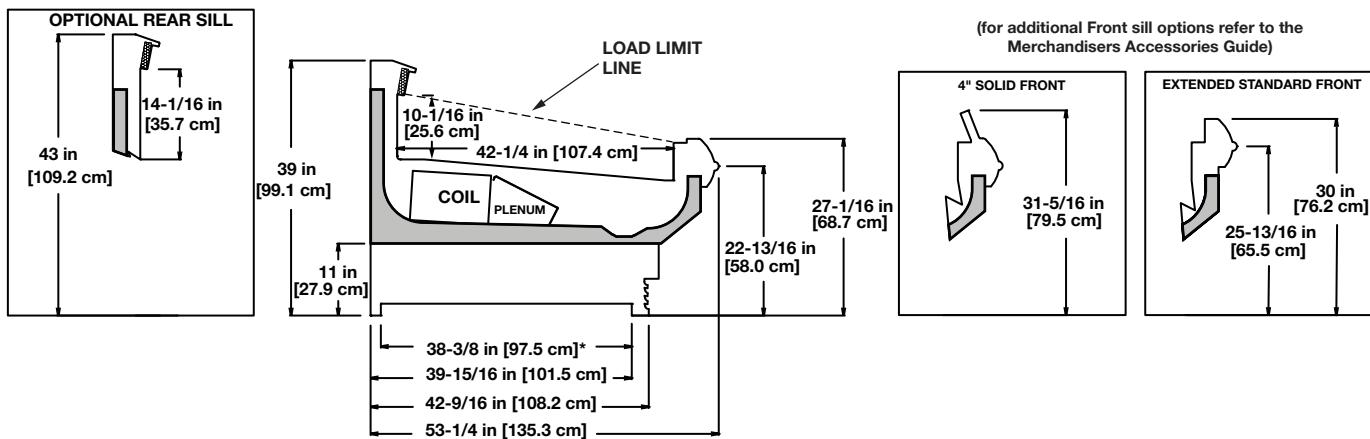
2 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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**NOTES:**

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE - 5/8"; LIQUID LINE - 3/8"
- FRONT AND REAR SILLS HEIGHTS VARY WITH BASE FRAME HEIGHT
- DASHED LINES SIGNIFY AREA INSIDE THE BASE RAIL BEHIND KICK-PLATE



Single-Deck Frozen Food Merchandiser

OWZ - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heater (Front Glass)		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OWZ	8'	2	0.68	34	0.30	22	0.70	84.4	7.69	1600	8.87	2130
	12'	3	1.02	51	0.45	33	1.06	126.6	11.54	2400	13.31	3195

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (F°)	Evaporator (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ³ Air Velocity (FPM)
OWZ (med temp)	245	6 - 8	20	27	39	255
OWZ (low temp)	310	3 - 5	-22	-10	12	255

Defrost Controls

Model	Defrosts Per Day	Run-Off Time (min)	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)
OWZ (med temp)	2	5	35	47	---	---	20	60	---	---
OWZ (low temp)	3	5	50	45	---	---	20	60	---	---

1 NOTE: “---” indicates that this is not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.12.
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

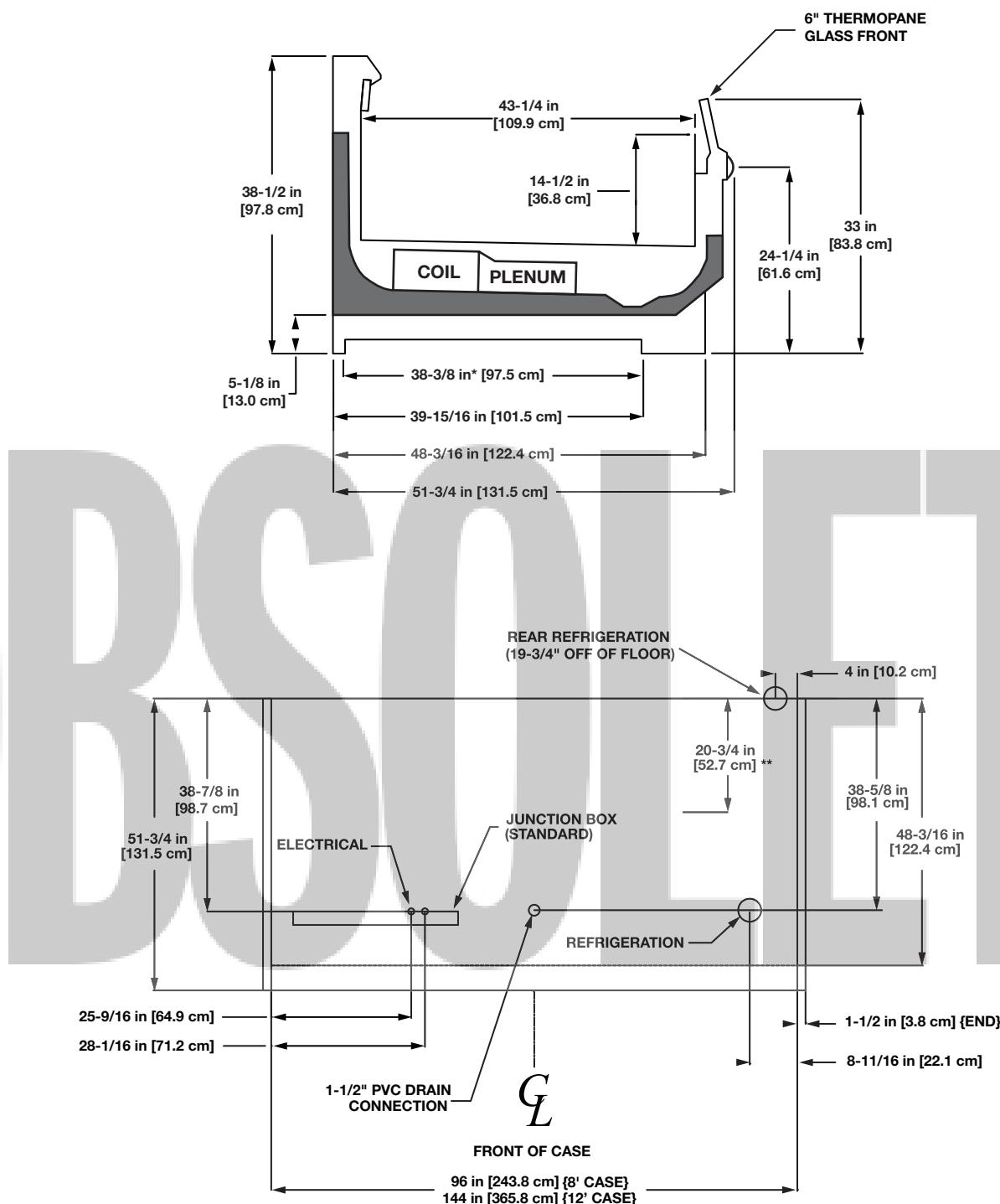
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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SINGLE-DECK

Frozen Food



NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS
 - ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
 - A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
 - SUCTION LINE - 7/8"; LIQUID LINE - 1/2"

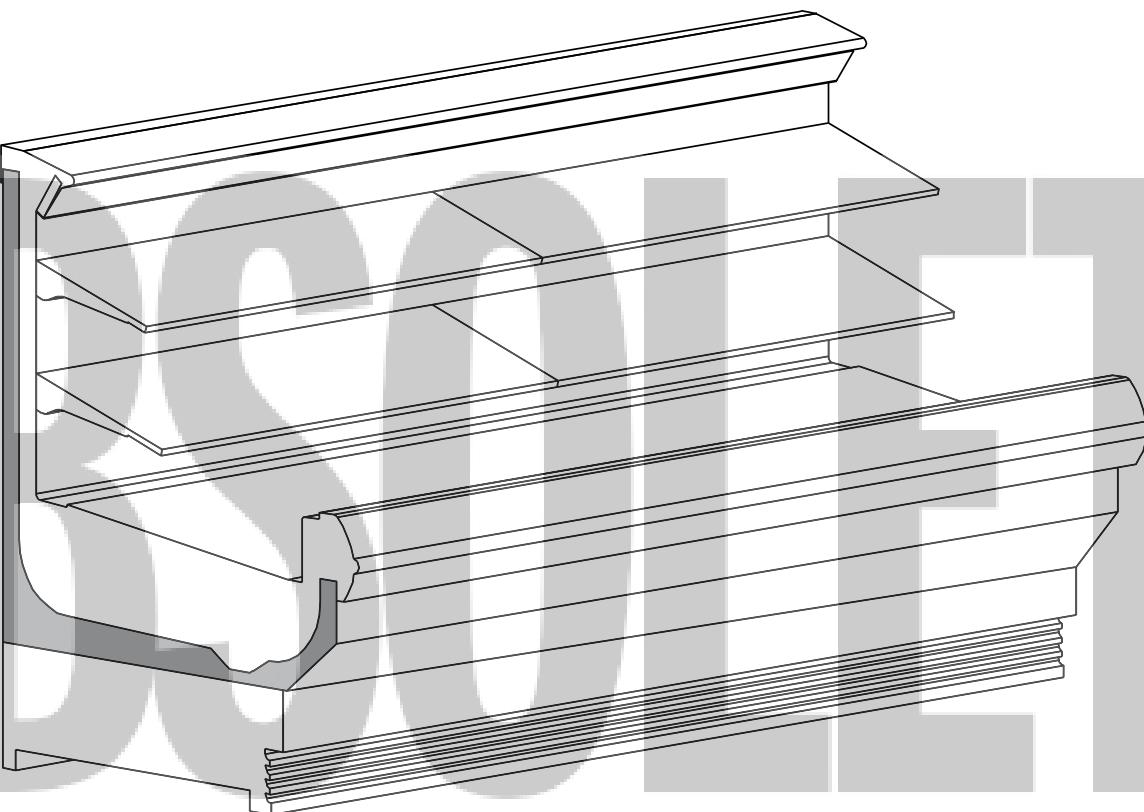


OBSOLETE



UTILITY

UTILITY



NOTES

- Cases shown with an ANSI/NSF* mark are listed by NSF.
- Cases shown with a UL* mark are listed by Underwriters Laboratories Inc.
- Allow for an extra 1/8" per joint when lining up merchandisers.
- Technical information contained herein is subject to change without notice.

* ANSI - American National Standard Institute
NSF - National Sanitation Foundation
UL - Underwriters Laboratories Inc

Narrow Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

ONUM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ONUM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
					Standard Power (Cornice or Shelf)		High Power (Cornice)		
			120 Volts		120 Volts		120 Volts		
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts	Amps	Watts	
ONUM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ONUM	478	6-8	22	28	35	280

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONUM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model ONUM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

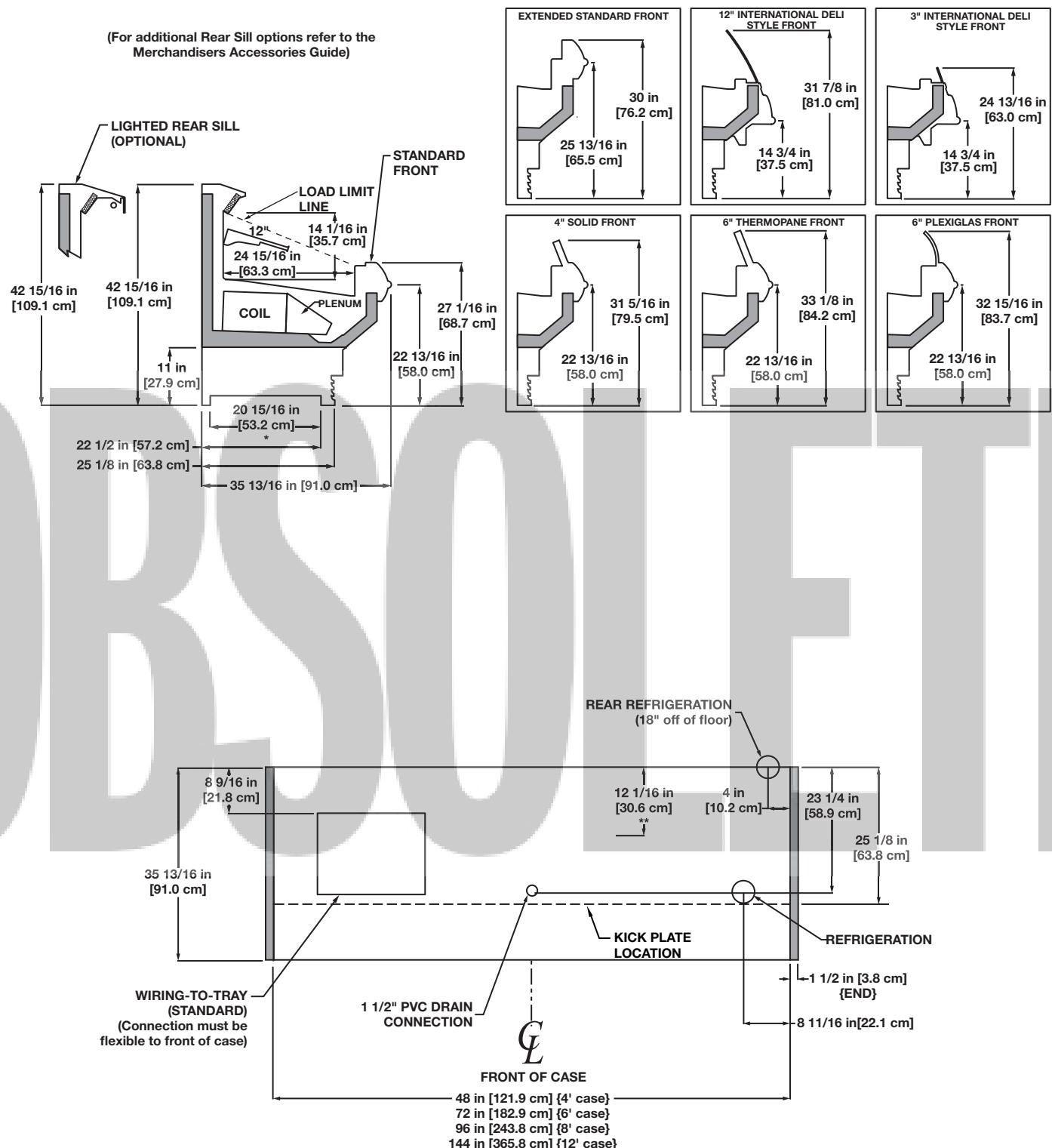
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY

ONUM
(11" BASEFRAME)

HILL PHOENIX
EXCELENE
A DOVER COMPANY



UTILITY

Produce/Dairy/Deli/Meat/Seafood

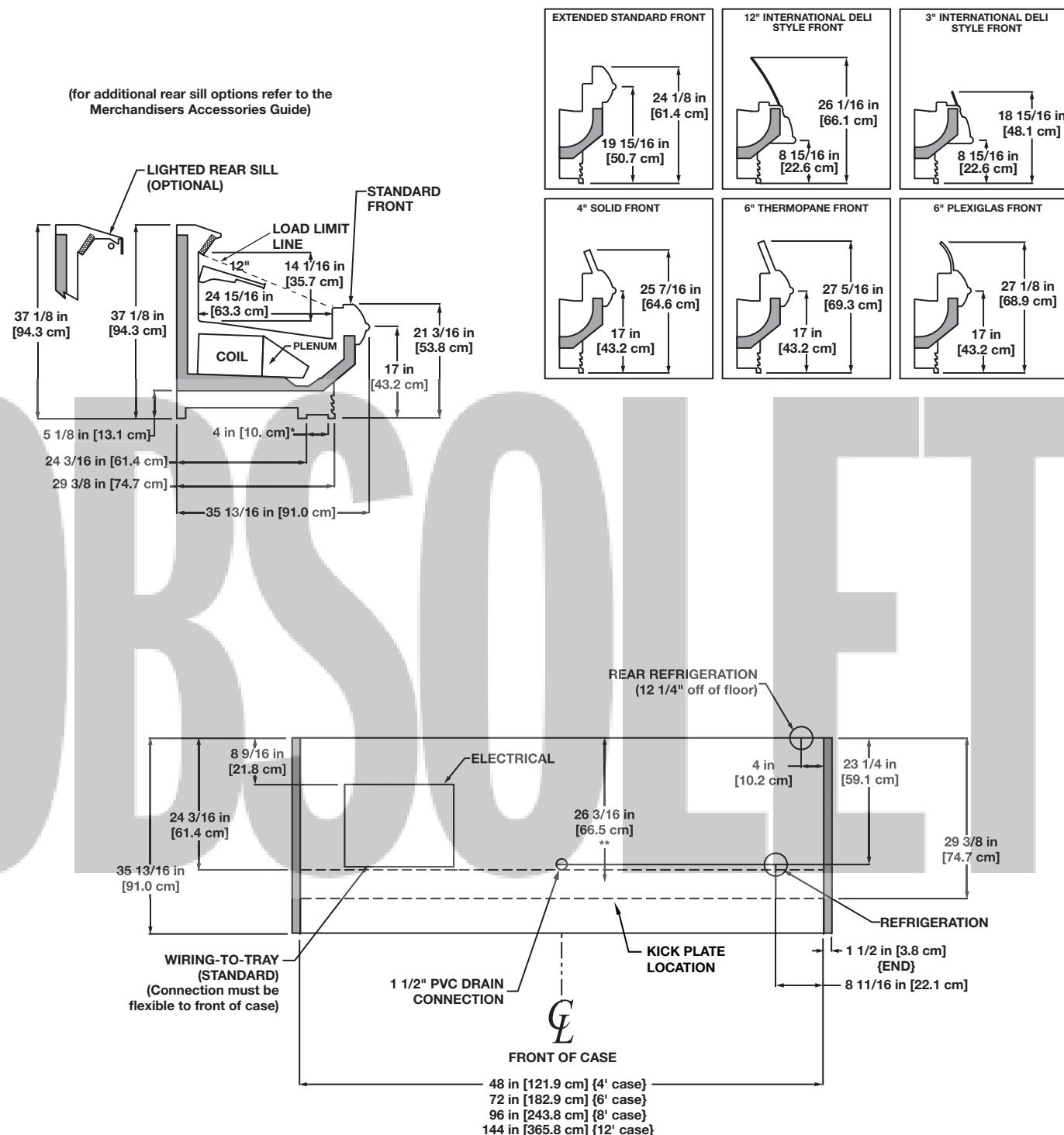


ONUM

(5" BASEFRAME)

HILL PHOENIX®

A DOVER COMPANY



NOTES:

* STUB-UP AREA

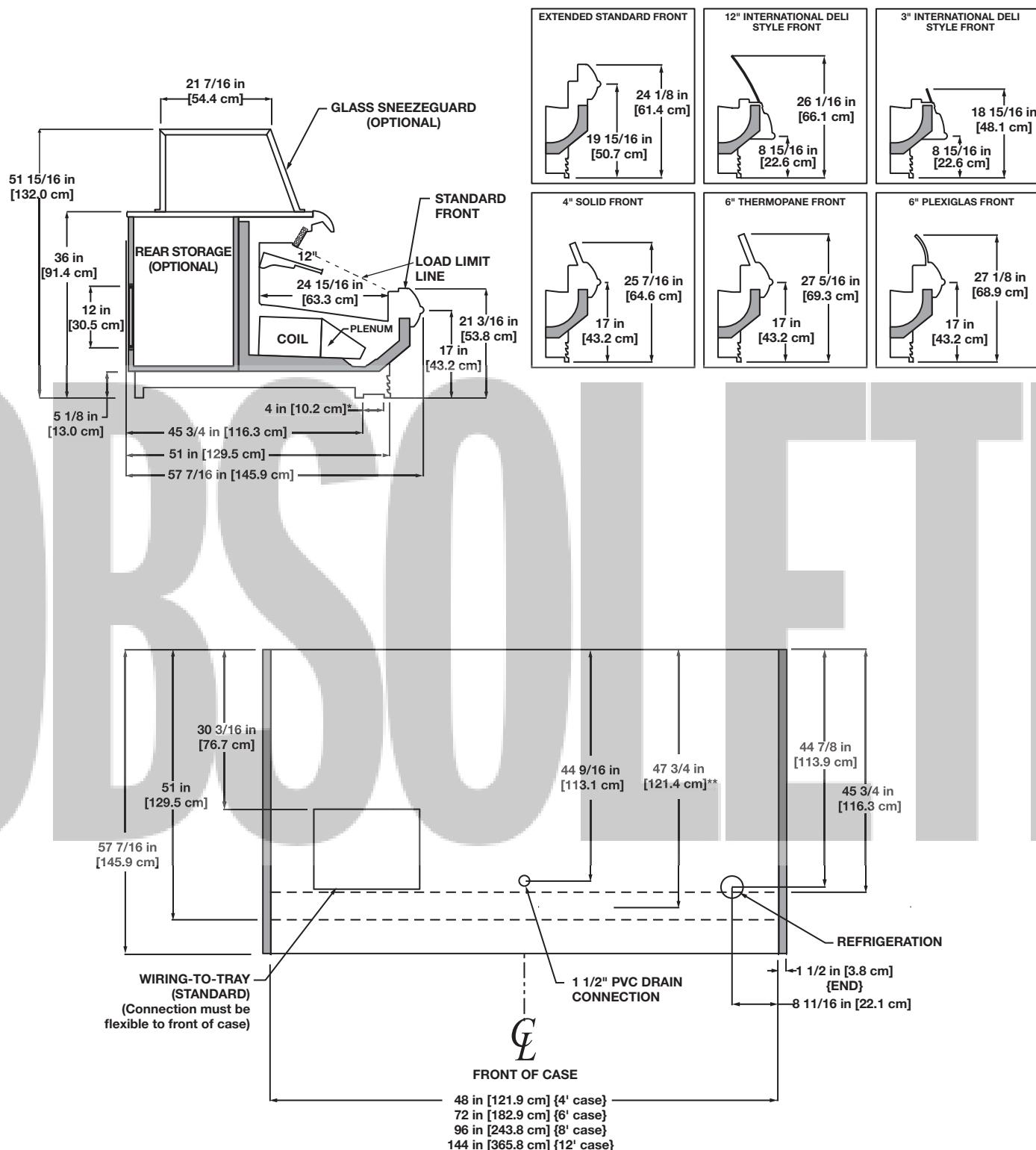
** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (4' & 6') - 1/2", SUCTION LINE (8' & 12') - 5/8", LIQUID LINE (ALL LENGTHS) - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



ONUM
(PREPARED FOODS)

HILL PHOENIX
EXCELLENCE
A DOVER COMPANY



UTILITY

Produce/Dairy/Deli/Meat/Seafood



Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

OUM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OUM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
					Standard Power (Cornice or Shelf)		High Power (Cornice)		
			120 Volts		120 Volts		120 Volts		
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts	Amps	Watts	
OUM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
OUM	758	6-8	22	27	40	340

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OUM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model OUM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.

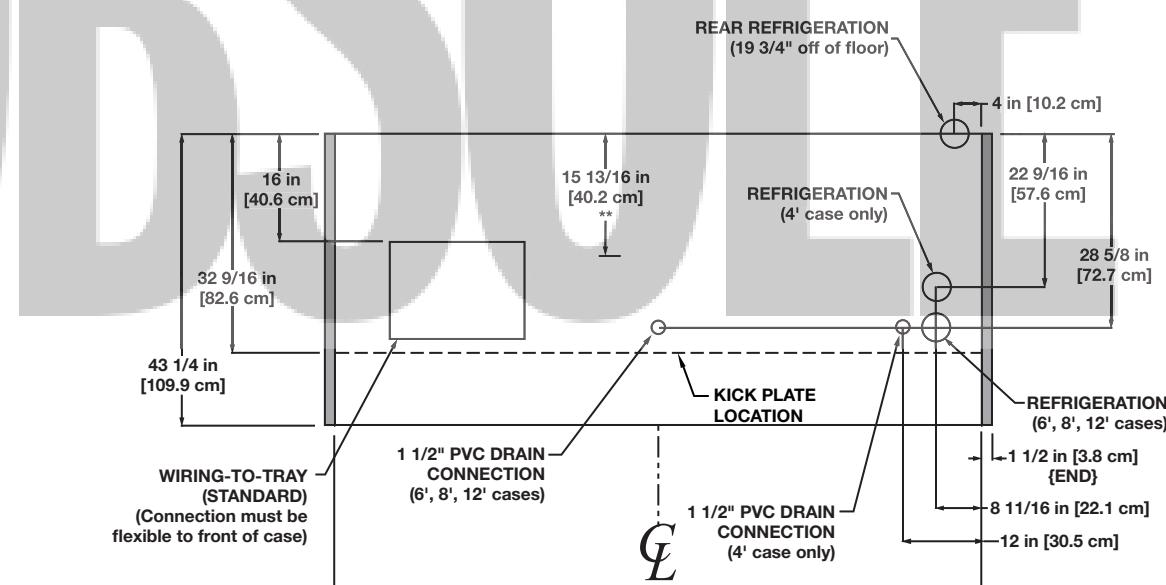
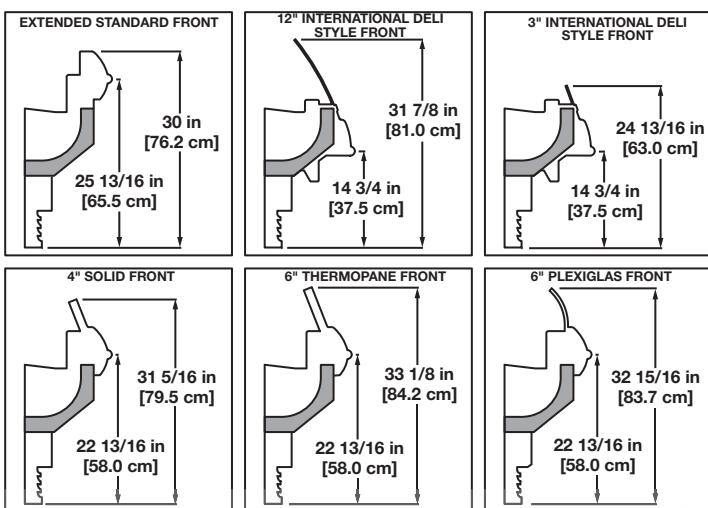
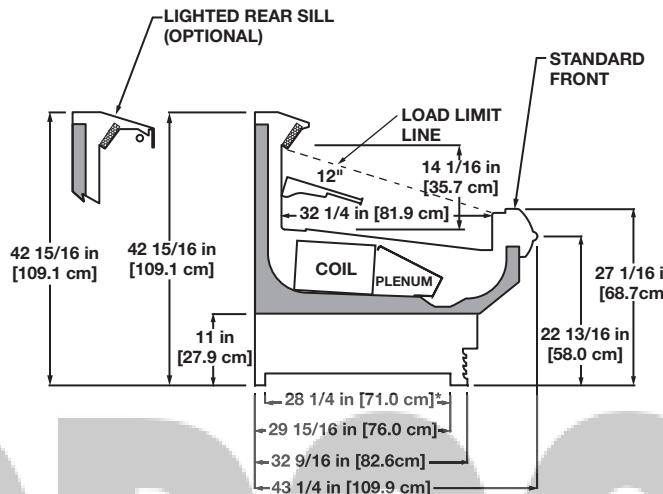


HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY

OUM
(11" BASEFRAME)

HILL PHOENIX®
EXCELLLENCE
A DOVER COMPANY

(For additional rear sill options, refer to the Merchandisers Accessories Guide)



48 in [121.9 cm] {4' case}
72 in [182.9 cm] {6' case}
96 in [243.8 cm] {8' case}
144 in [365.8 cm] {12' case}

NOTES:

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



UTILITY

Produce/Dairy/Deli/Meat/Seafood

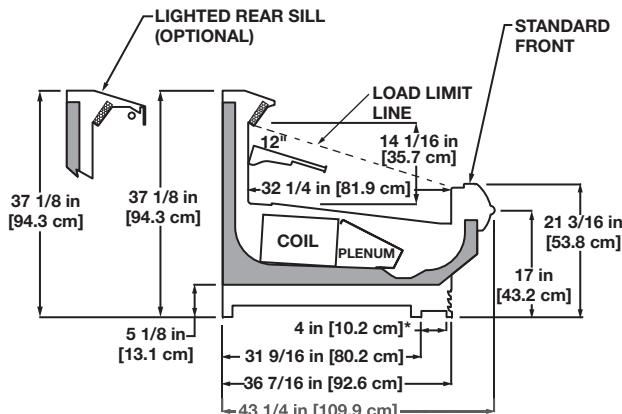
OUM

(5" BASEFRAME)

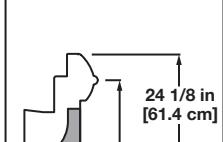
HILL PHOENIX

A DOVER COMPANY

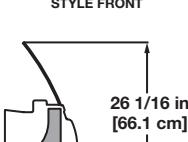
(for additional rear sill options refer to the Merchandisers Accessories Guide)



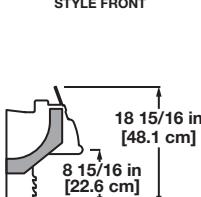
EXTENDED STANDARD FRONT



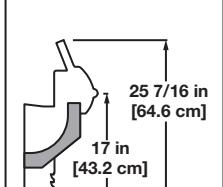
12" INTERNATIONAL DELI STYLE FRONT



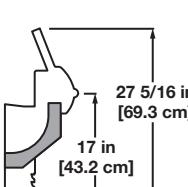
3" INTERNATIONAL DELI STYLE FRONT



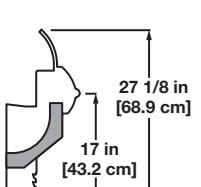
4" SOLID FRONT



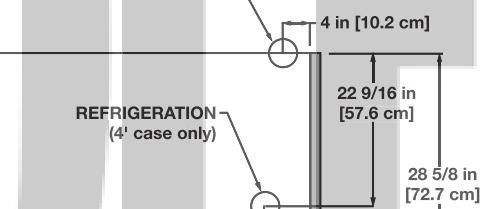
6" THERMOPANE FRONT



6" PLEXIGLAS FRONT



REAR REFRIGERATION (19 3/4" off floor)



REFRIGERATION (4' case only)

KICK PLATE LOCATION

G
FRONT OF CASE

1 1/2" PVC DRAIN CONNECTION (6', 8', 12' cases)

48 in [121.9 cm] {4' case}
72 in [182.9 cm] {6' case}
96 in [243.8 cm] {8' case}
144 in [365.8 cm] {12' case}

1 1/2" PVC DRAIN CONNECTION (4' case only)

WIRING-TO-TRAY (STANDARD)
(Connection must be flexible to front of case)

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

* STUB-UP AREA

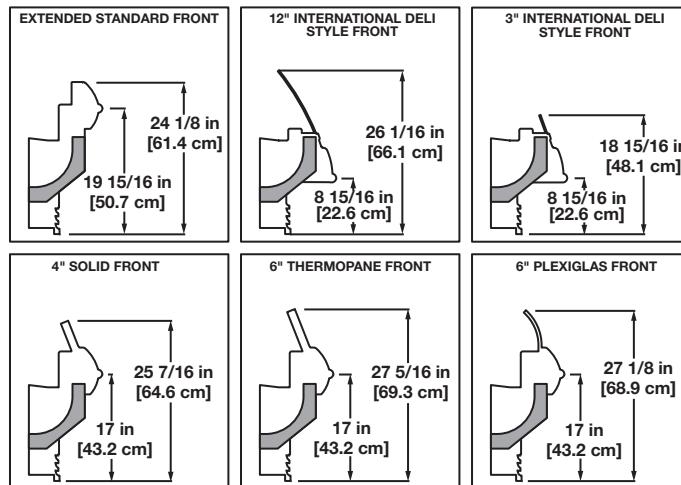
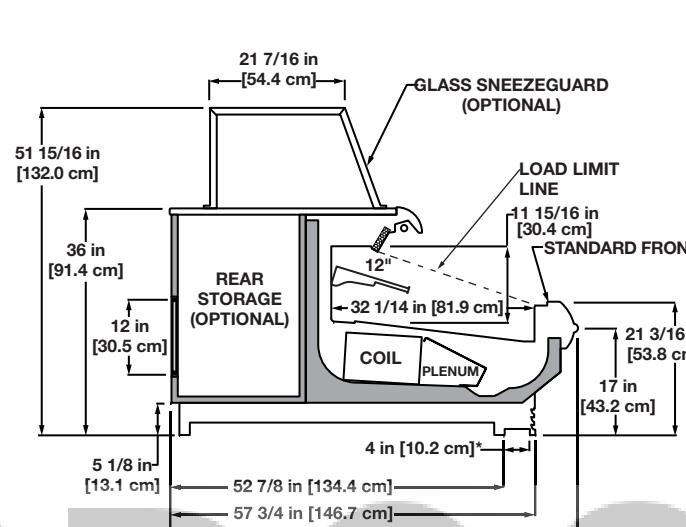
** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



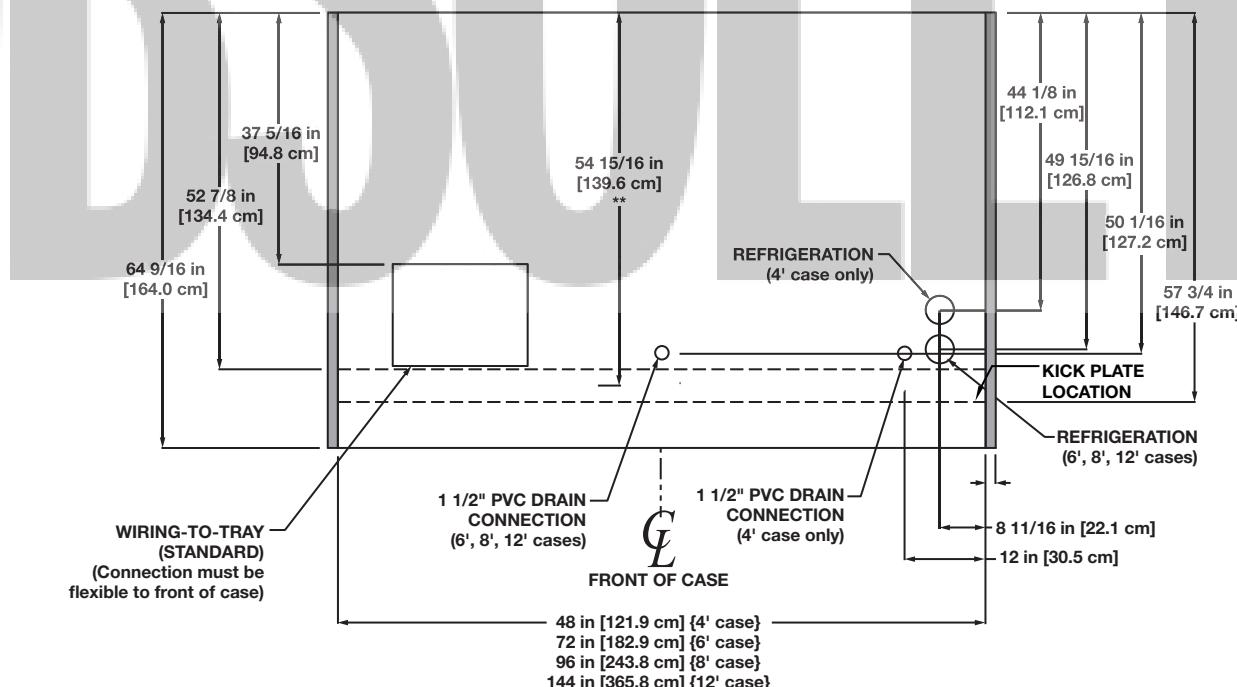
OUM
(PREPARED FOODS)

HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY



UTILITY

Produce/Dairy/Deli/Meat/Seafood



- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- SUCTION LINE (4' & 6') - 1/2", SUCTION LINE (8' & 12') - 5/8", LIQUID LINE (ALL LENGTHS) - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Narrow Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

ON2UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ON2UM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts		120 Volts		120 Volts		
ON2UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ON2UM	605	6-8	22	28	35	280

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON2UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model ON2UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



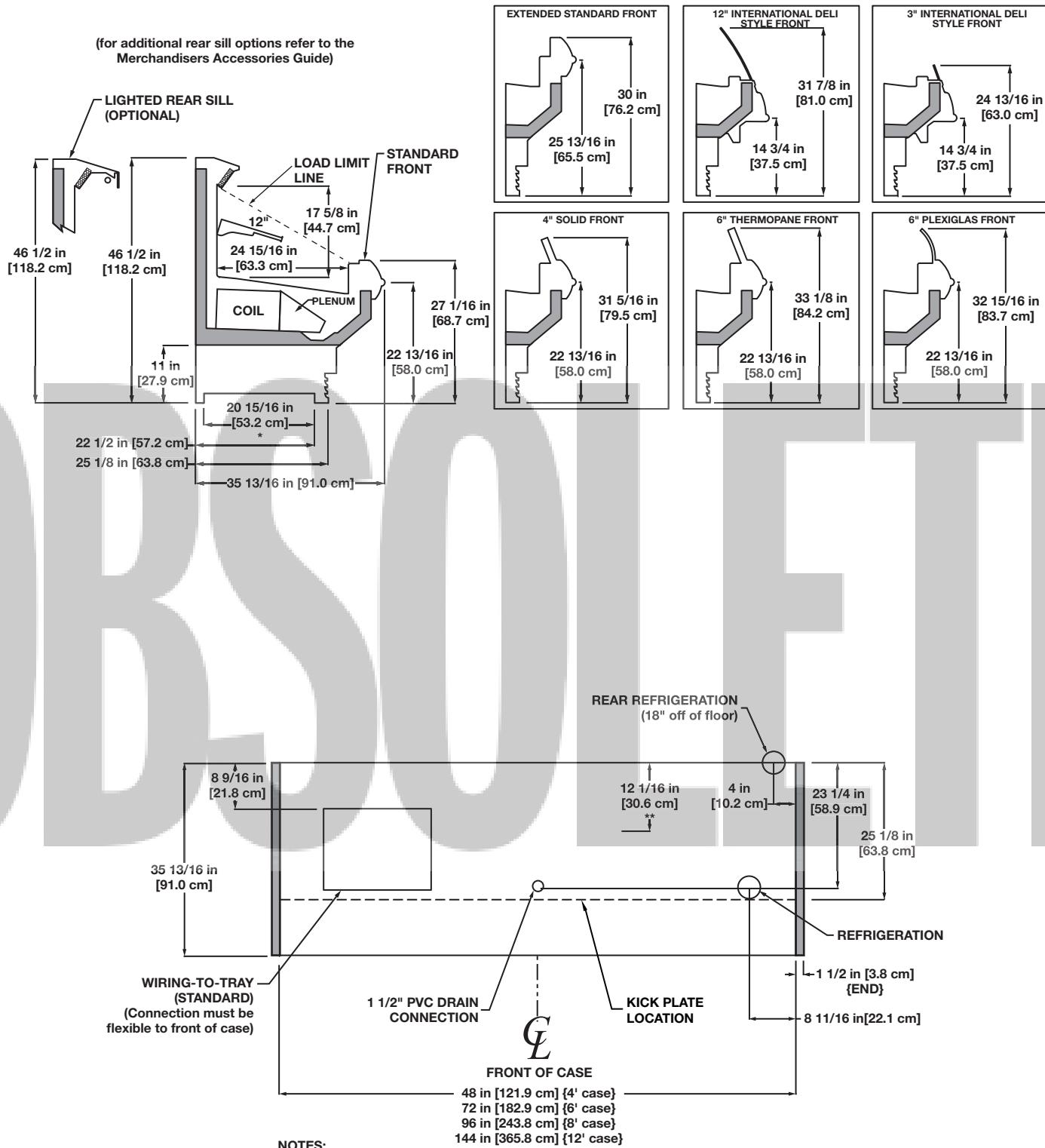
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A DOVER COMPANY

ON2UM

(11" BASEFRAME)

HILL PHOENIX®

A DOVER COMPANY



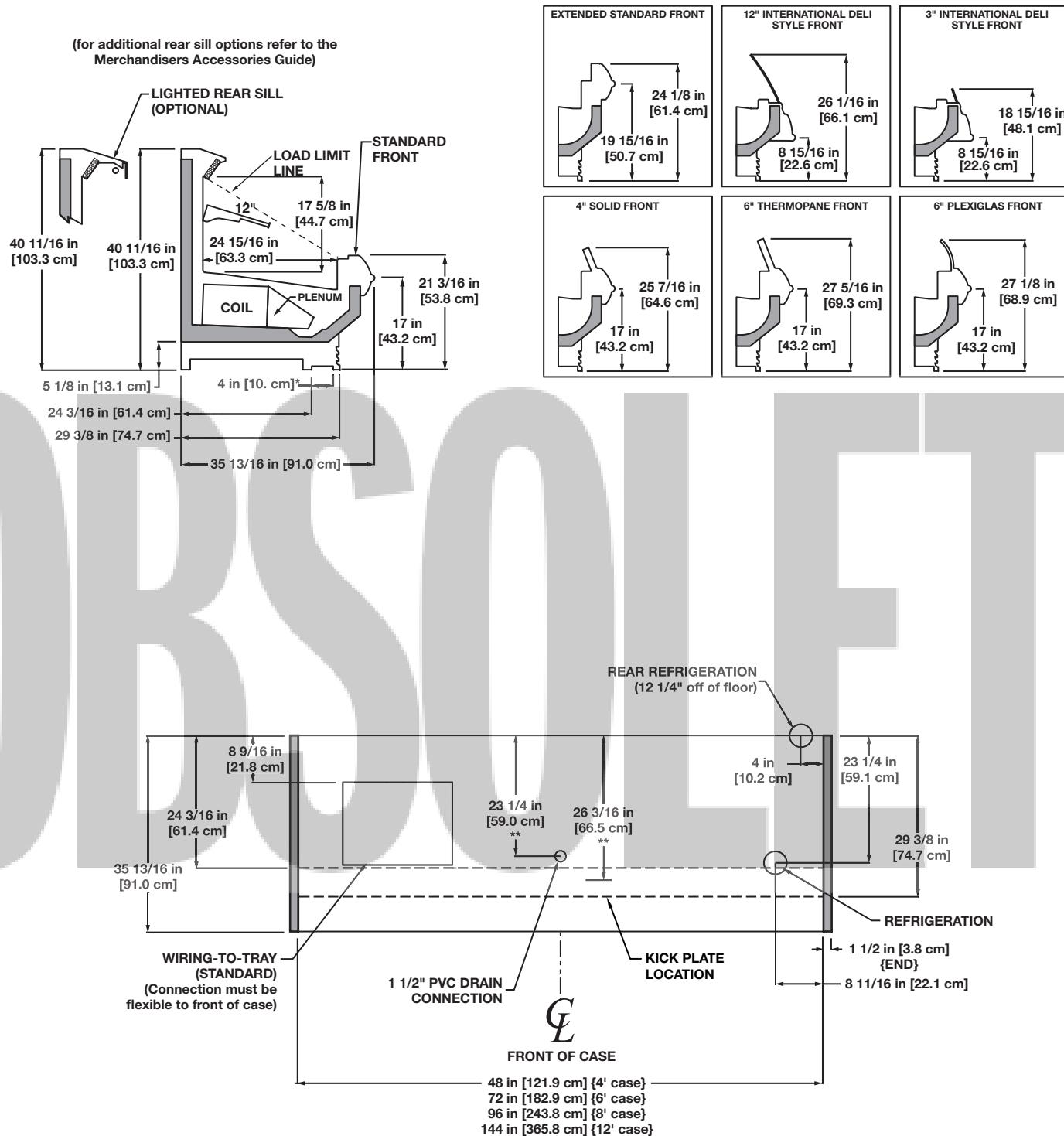
UTILITY

Produce/Dairy/Deli/Meat/Seafood



ON2UM
(5" BASEFRAME)

HILL PHOENIX®
EXCELLENCE
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NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

O2UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O2UM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
					Standard Power (Cornice or Shelf)		High Power (Cornice)		
			120 Volts		120 Volts		120 Volts		
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts	Amps	Watts	
O2UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
O2UM	948	6-8	22	27	40	340

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O2UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model O2UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

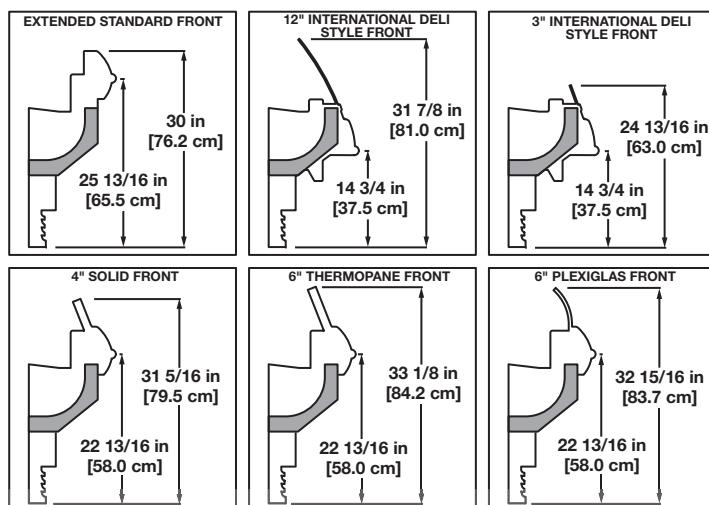
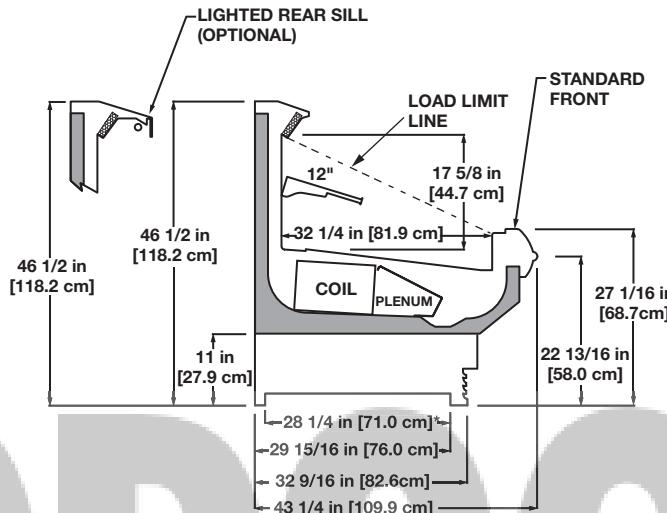
Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



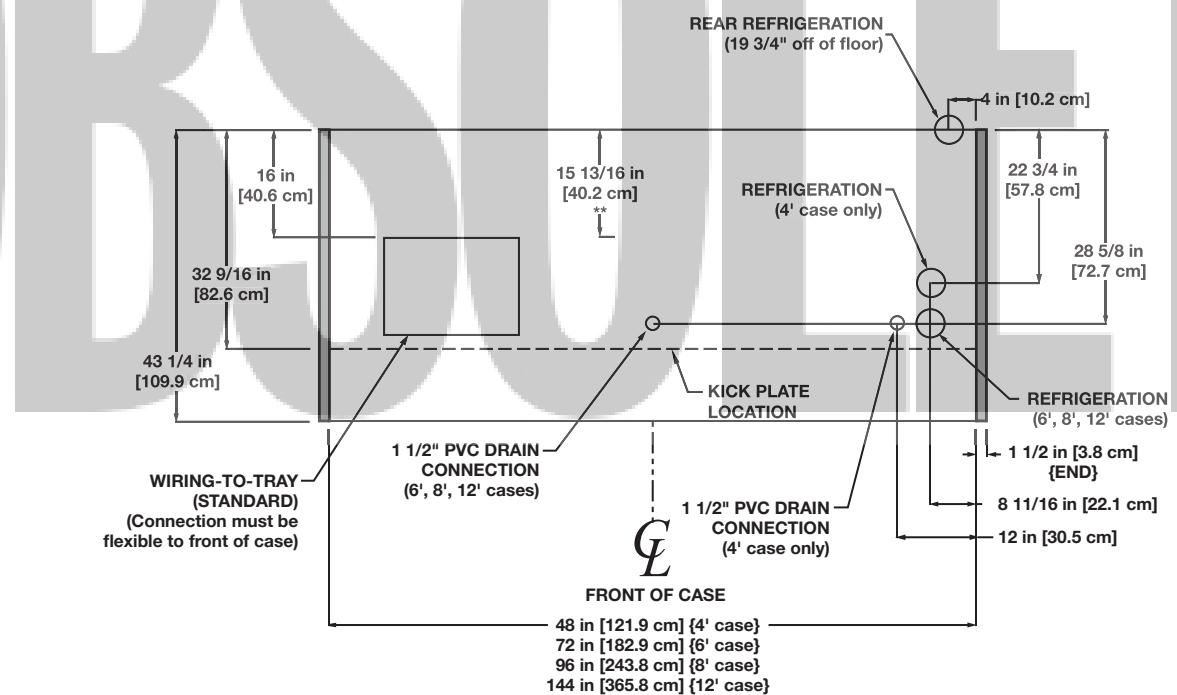
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EXCELLLENCE
A DOVER COMPANY

(for additional rear sill options refer to the Merchandisers Accessories Guide)



UTILITY

Produce/Dairy/Deli/Meat/Seafood



NOTES:

* STUB-UP AREA

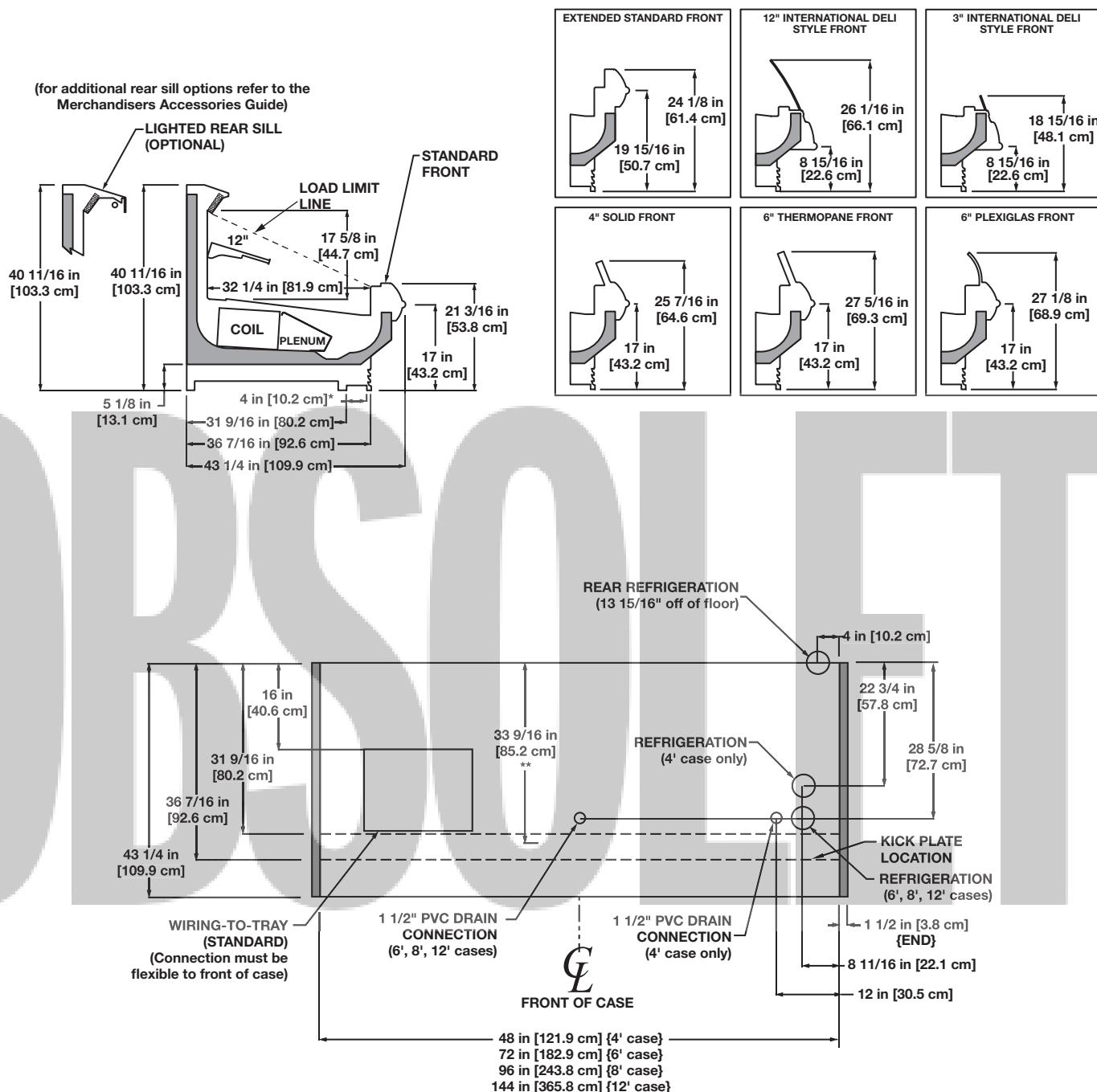
** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



O2UM
(5" BASEFRAME)

HILL PHOENIX
EXCELLENCE
A DOVER COMPANY



OBSOLETE

Wide Multi-Deck Produce/Dairy/Deli Merchandiser

OW2UM - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OW2UM	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)						
			Fluorescent Lighting (Per Light Row)			Standard Power (Cornice)			
			120 Volts		120 Volts		120 Volts		
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts	Amps	Watts	
OW2UM	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
OW2UM	1184	6-8	22	27	40	340

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OW2UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model OW2UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

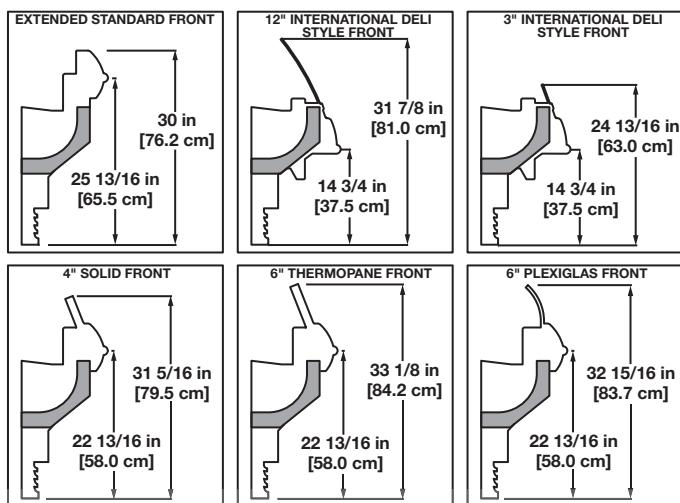
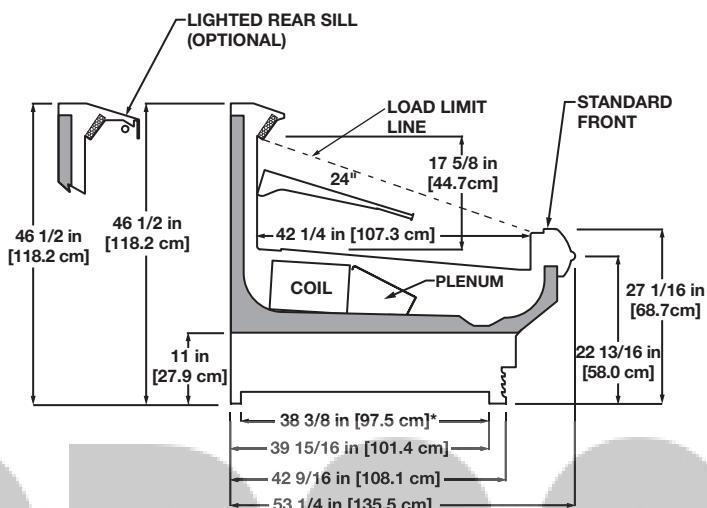
Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



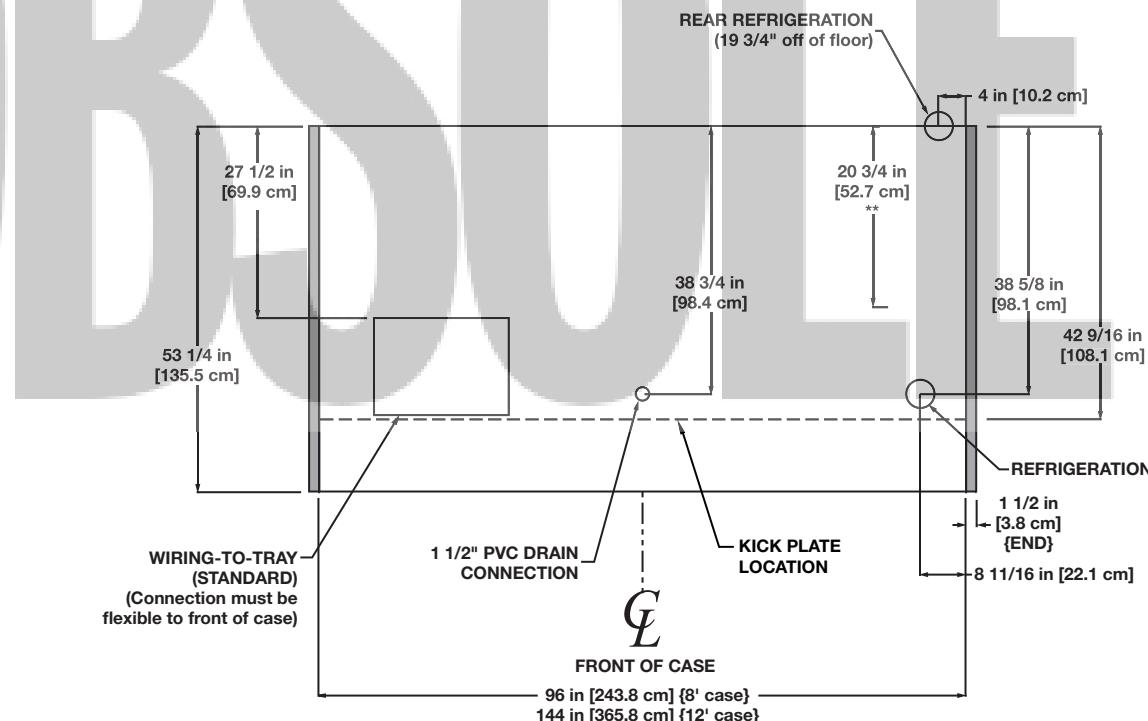
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EXCELLLENCE
A DOVER COMPANY

(for additional rear sill options refer to the Merchandisers Accessories Guide)



UTILITY

Produce/Dairy/Deli



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18", 20", 22" & 24"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-24"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Narrow Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

ON2.5UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ON2.5UM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
ON2.5UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ON2.5UM	739	6-8	22	28	35	284

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON2.5UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model ON2.5UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.

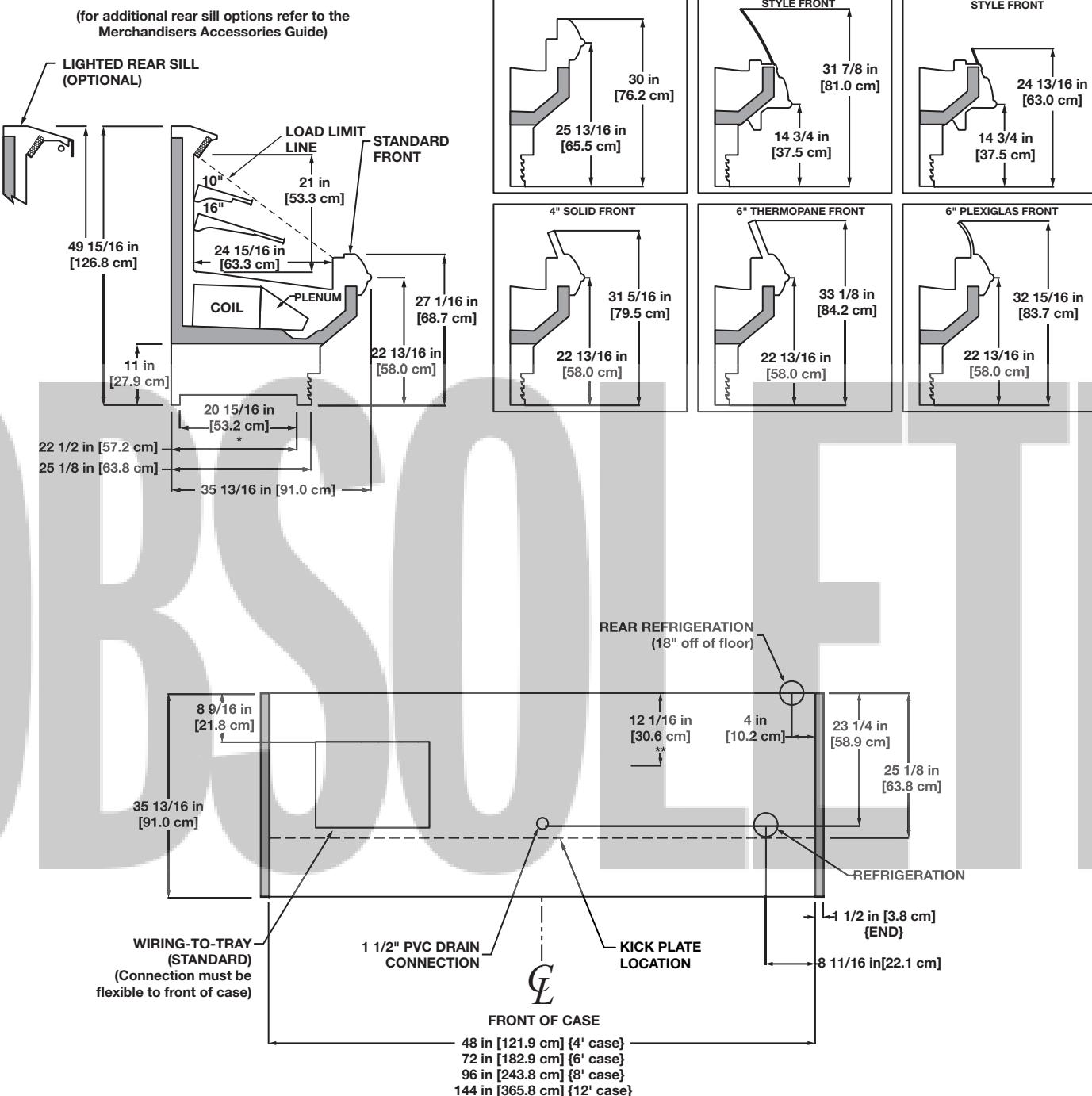


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ON2.5UM
(11" BASEFRAME)

HILL PHOENIX
EXCELLERATION
A DOVER COMPANY



UTILITY

Produce/Dairy/Deli/Meat/Seafood

NOTES:

* STUB-UP AREA

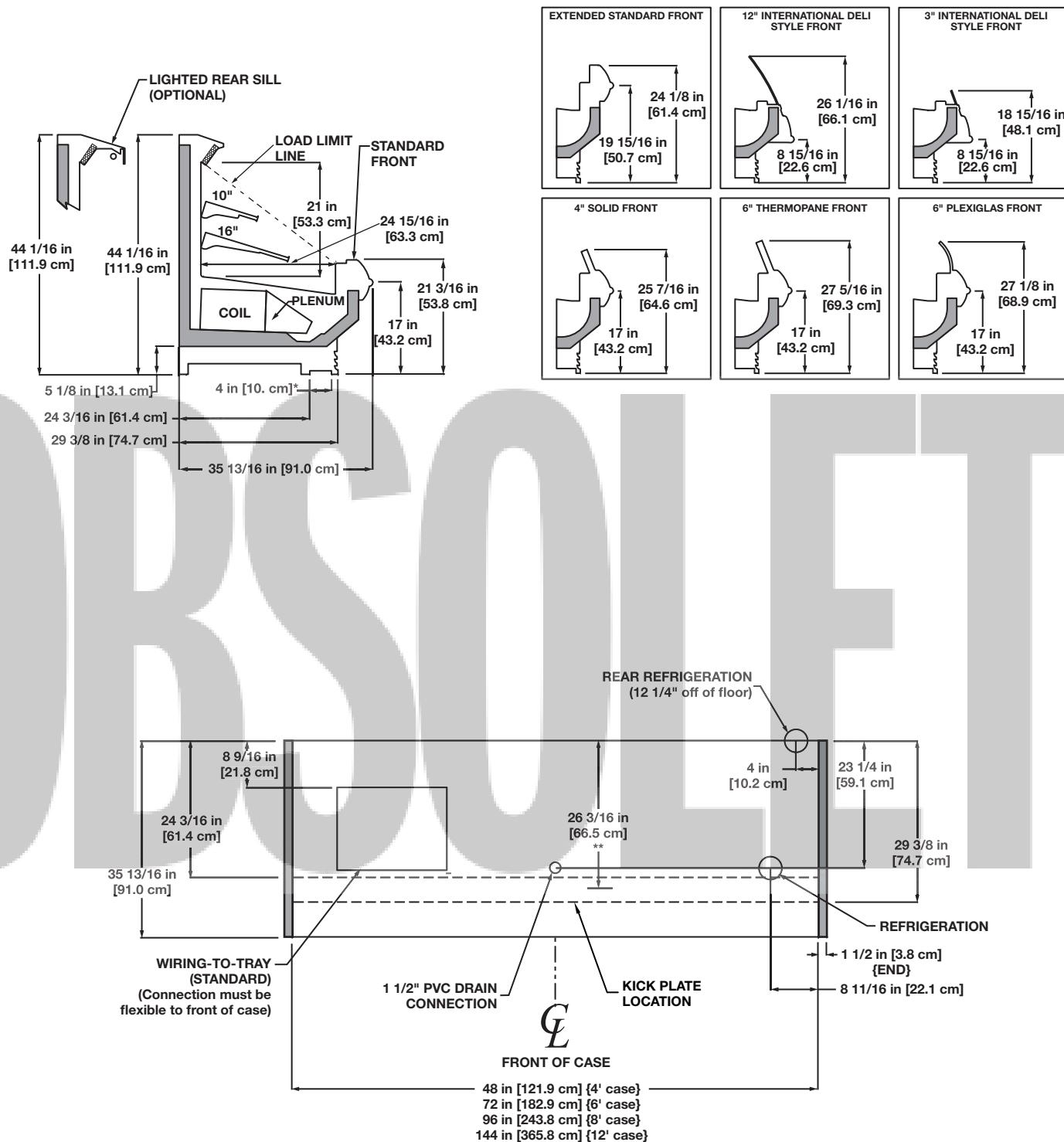
** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-10" & 1-16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



ON2.5UM
(5" BASEFRAME)

HILL PHOENIX®
A DOVER COMPANY



NOTES:

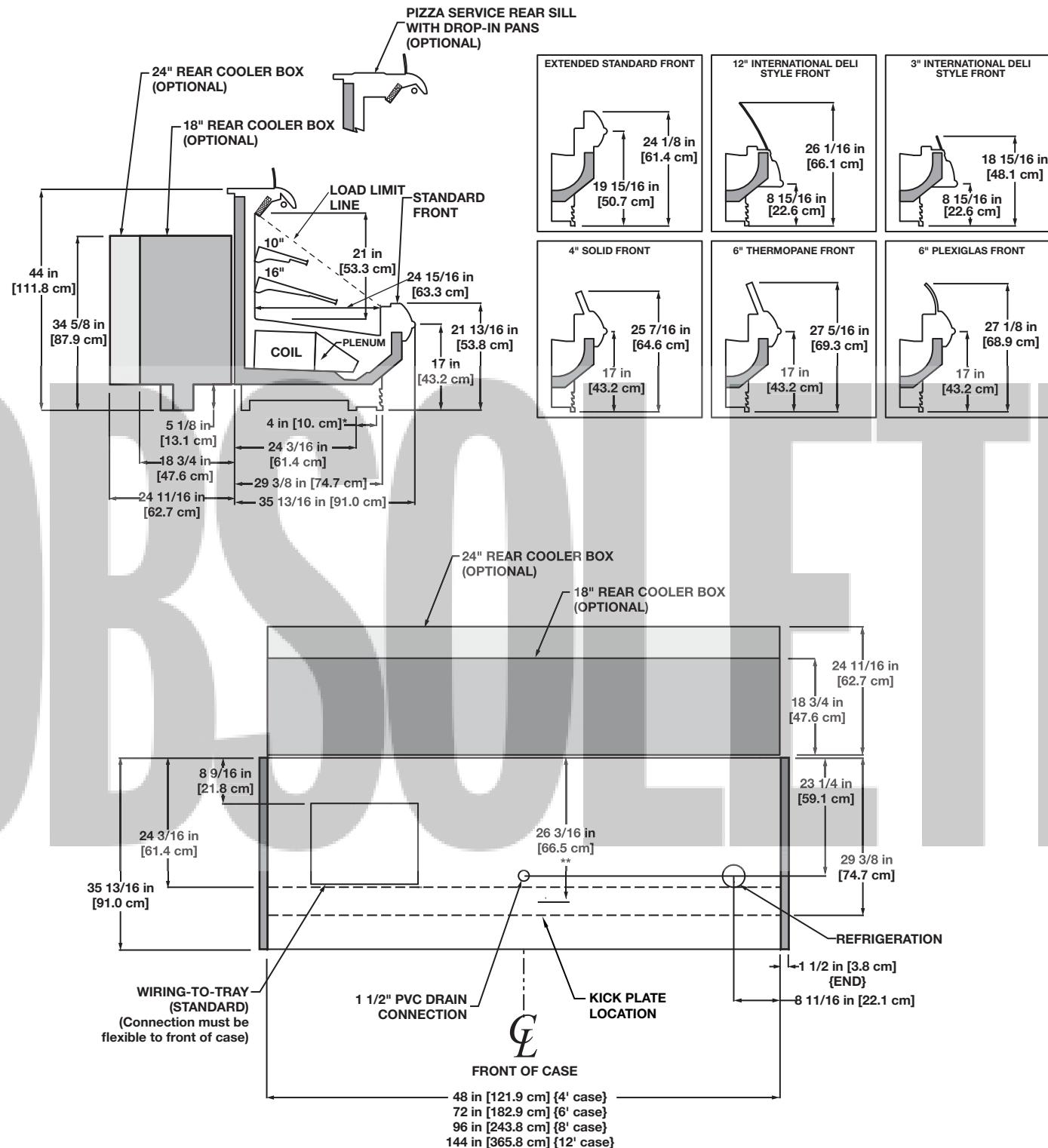
- * STUB-UP AREA
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- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-10" & 1-16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



ON2.5UM
REAR REFRIGERATED BOX

HILL PHOENIX®
EXCELLENCE
A DOVER COMPANY



UTILITY
Produce/Dairy/Deli/Meat/Seafood



Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

O2.5UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O2.5UM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
					Standard Power (Cornice or Shelf)		High Power (Cornice)		
			120 Volts		120 Volts		120 Volts		
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts	Amps	Watts	
O2.5UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ^{2,3}	⁴ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁵ Air Velocity (FPM)
O2.5UM	948	6-8	22	27	45	225
O2.5UM w/Plexi Dome	1308	6-8	22	32	46	305

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O2.5UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model O2.5UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 For cases with rear refrigerated storage boxes, add 110 BTUH/ft.

4 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

5 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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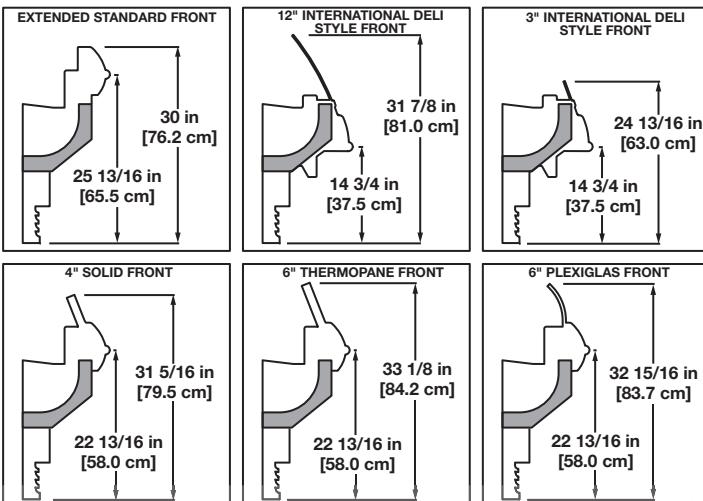
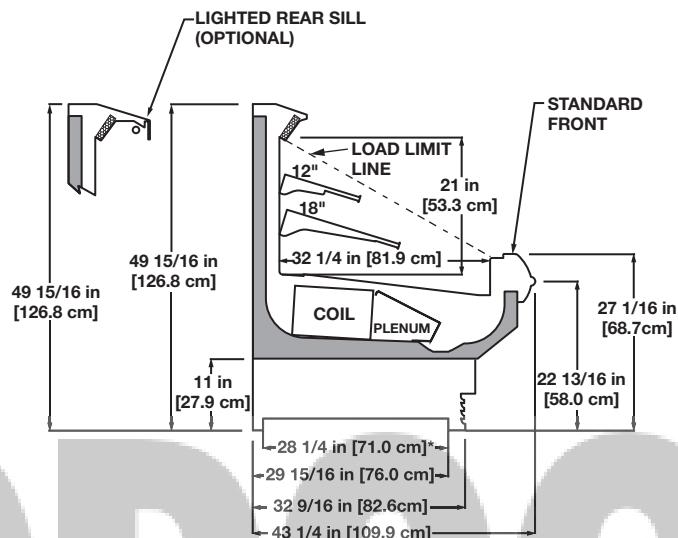
O2.5UM

(11" BASEFRAME)

HILL PHOENIX

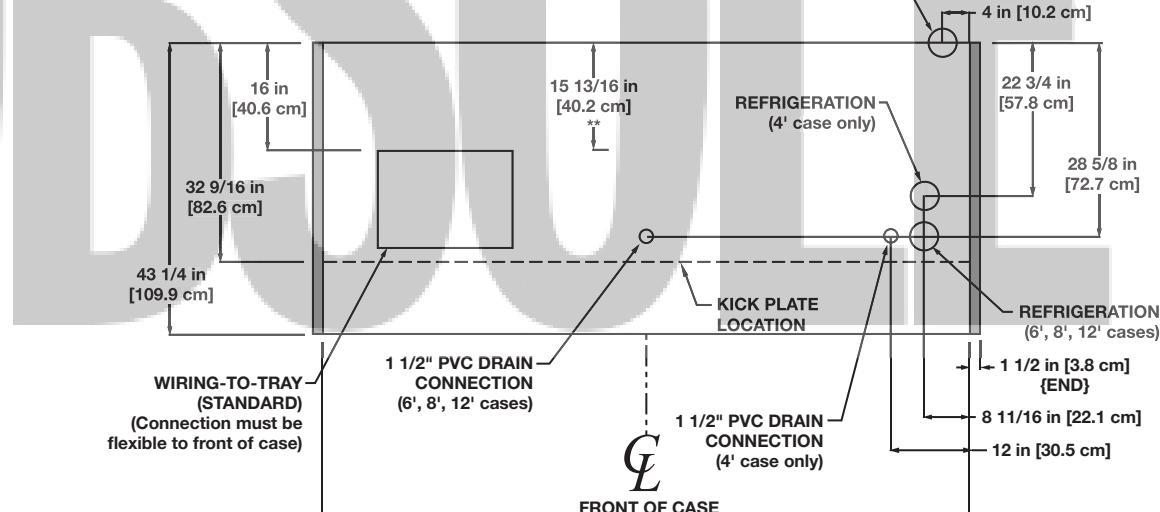
EXCELLLENCE
A DOVER COMPANY

(for additional rear sill options refer to the Merchandisers Accessories Guide)



UTILITY

Produce/Dairy/Deli/Meat/Seafood



* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

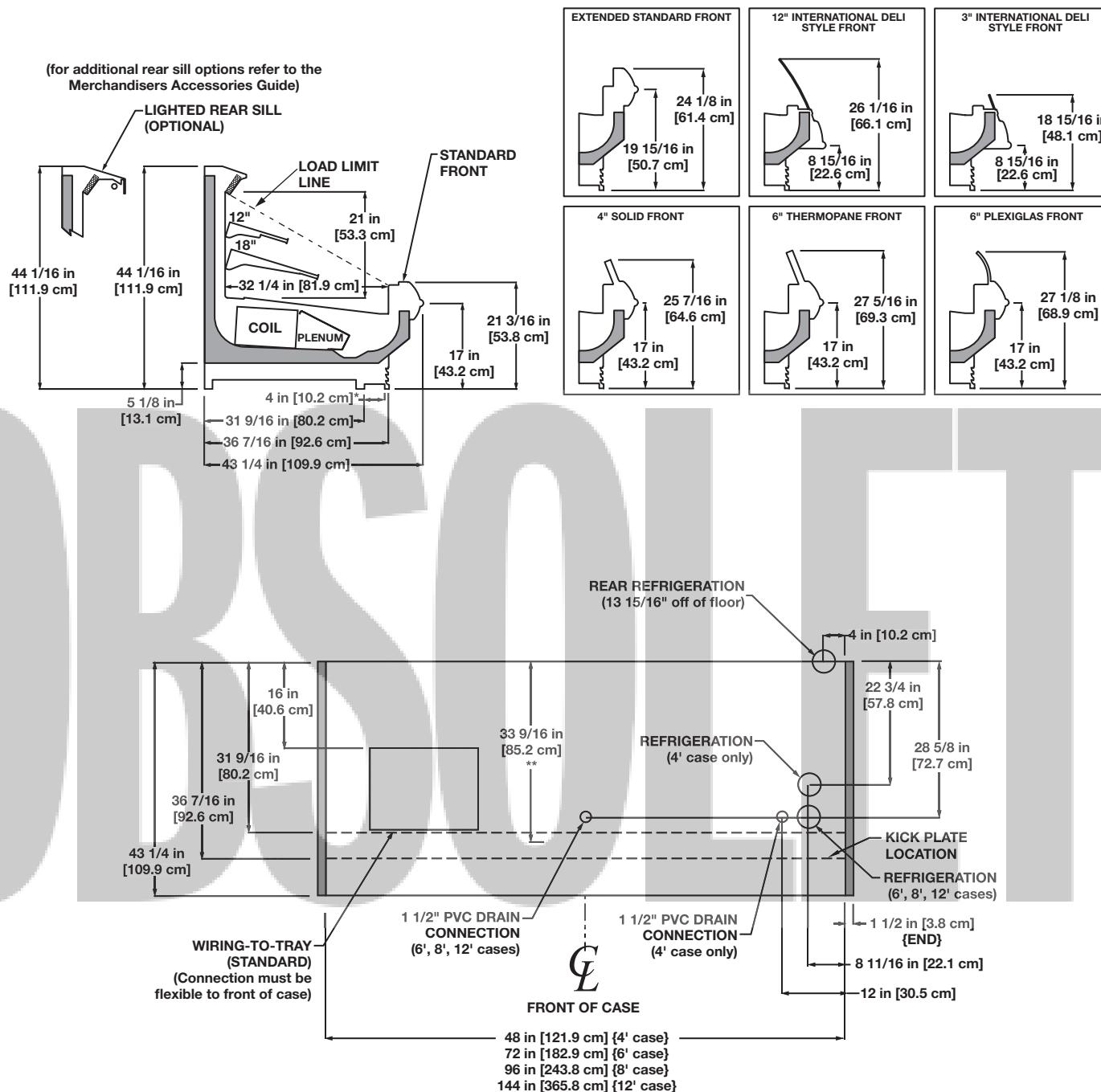
- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



O2.5UM

(5" BASEFRAME)

HILL PHOENIX
EXCELLENCE
A DOVER COMPANY

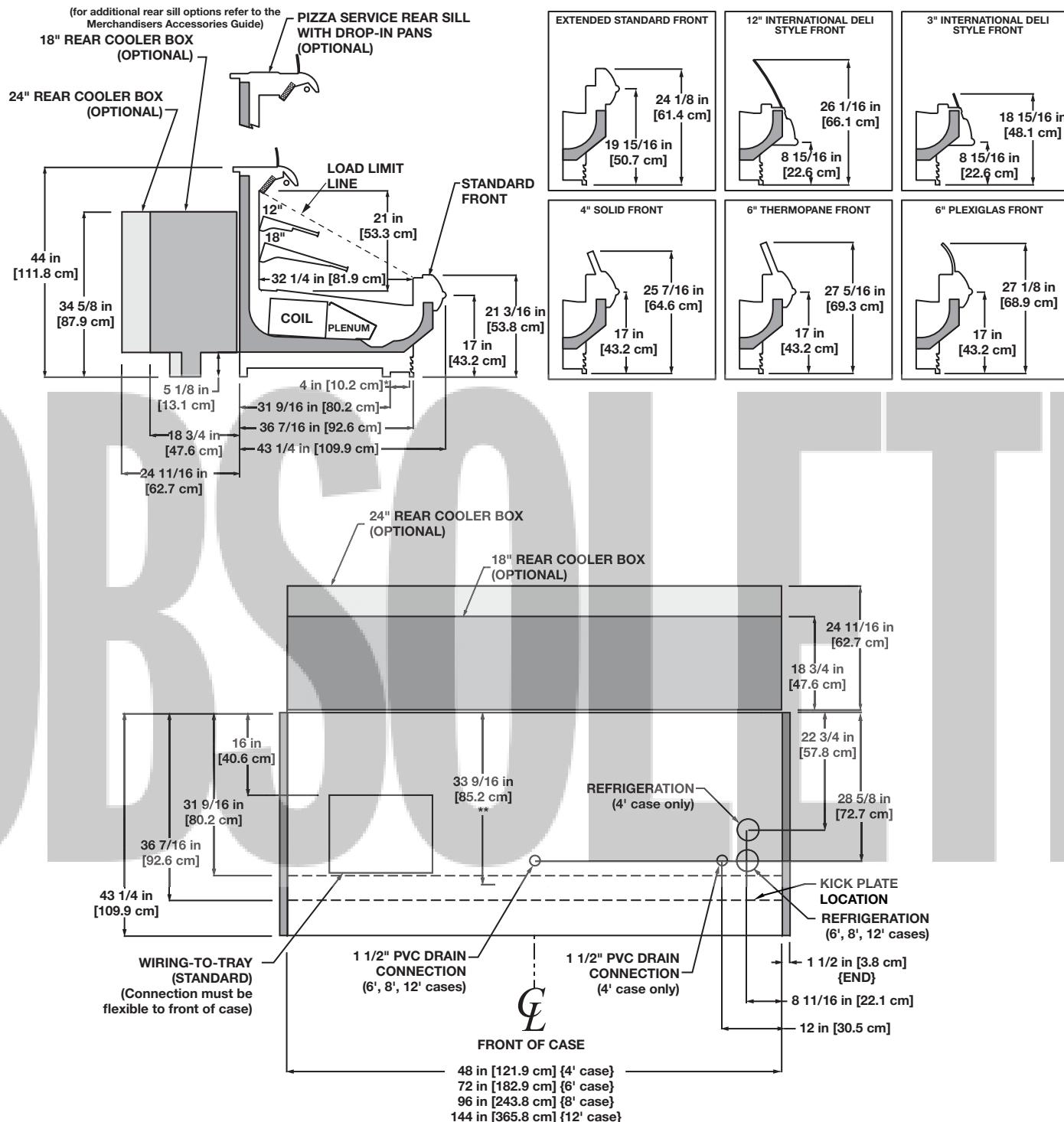


O2.5UM

REAR REFRIGERATED BOX

HILL PHOENIX®

EXCELLLENCE™
A DOVER COMPANY



Multi-Deck Self-Contained Produce/Dairy/Deli/Meat/Seafood Merchandiser

O2.5UMA - 8'

System Requirements

Model	Volts	Phase	Hz	Wire	Minimum Circuit Ampacity	Maximum Overcurrent Protection
O2.5UMA	208	1	60	3-wire+ground	13.56	30

Electrical Data

Model	Fans per Case	Standard Fans		Condenser Fan	Anti-Condensate Heaters ¹		Maximum Lights		Defrost Heaters				
		120 Volts		120 Volts	120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O2.5UMA	3	1.50	90	0.85	85	0.25	30	1.41	169	3.85	800	4.44	1065

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)										
			Fluorescent Lighting (Per Light Row)			Standard Power (Cornice)			High Power (Cornice)				
			120 Volts			120 Volts			120 Volts				
			Amps	Watts	Amps	Watts	Amps	Watts	Amps				
O2.5UMA	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4				

Guidelines & Control Settings

Model ²	24 hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
O2.5UMA		40	6-8	29	43	225

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ⁴ (amps)	LRA ⁵ (amps)	Refrig.	Lbs. of Refrig.
O2.5UMA	208	1	60	1	10.4	48.2	R22	5.25

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O2.5UMA	3	6-8	40	47	45	45	---	---	---	---

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model O2.5UMA only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 Average discharge air velocity at peak of defrost.

4 RLA - Running Load Amps.

5 LRA - Locked Rotor Amps.

6 NOTE: "----" not an option on this case model.

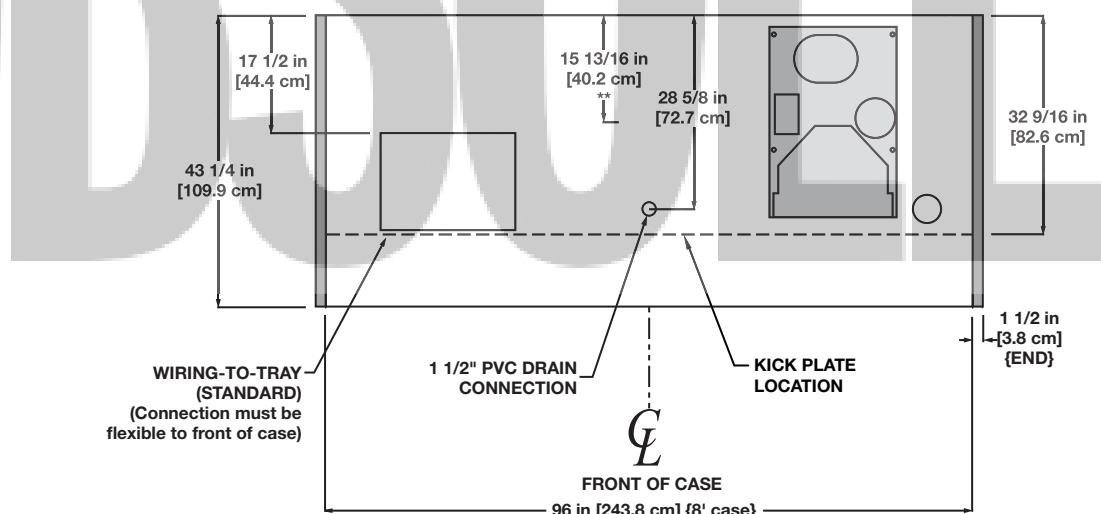
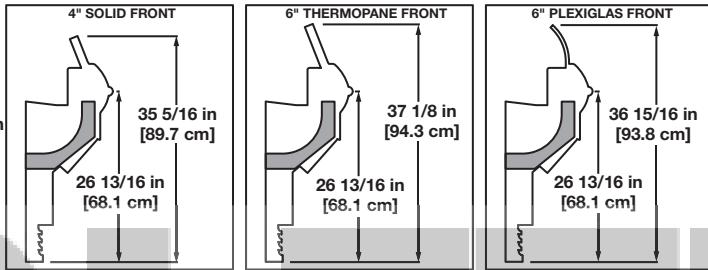
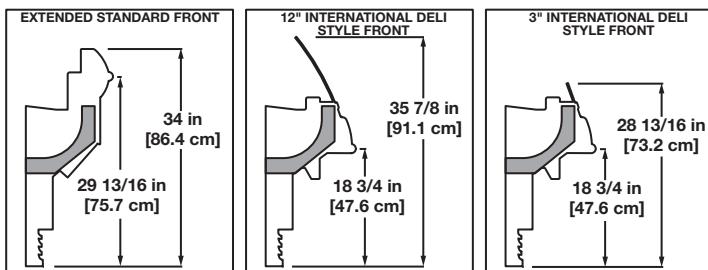
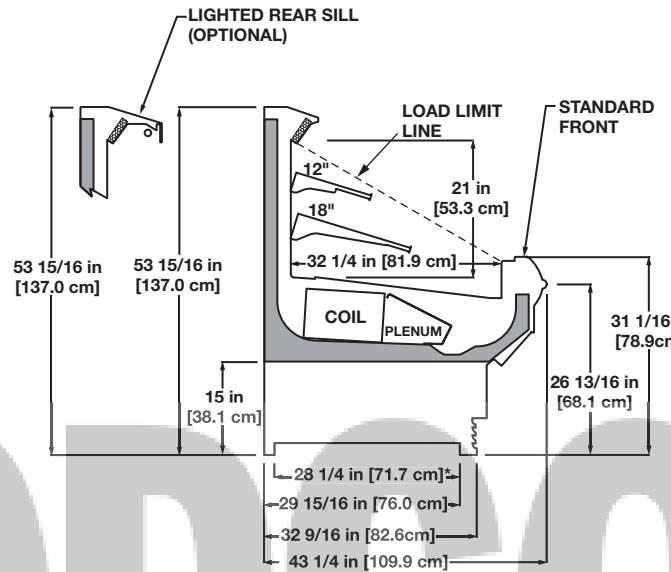
Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



A DOVER COMPANY

(for additional rear sill options refer to the Merchandisers Accessories Guide)



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



UTILITY

Produce/Dairy/Deli/Meat/Seafood

Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

O2.75UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O2.75UM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
O2.75UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
O2.75UM	953	6-8	22	37	45	225

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O2.75UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model O2.75UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.

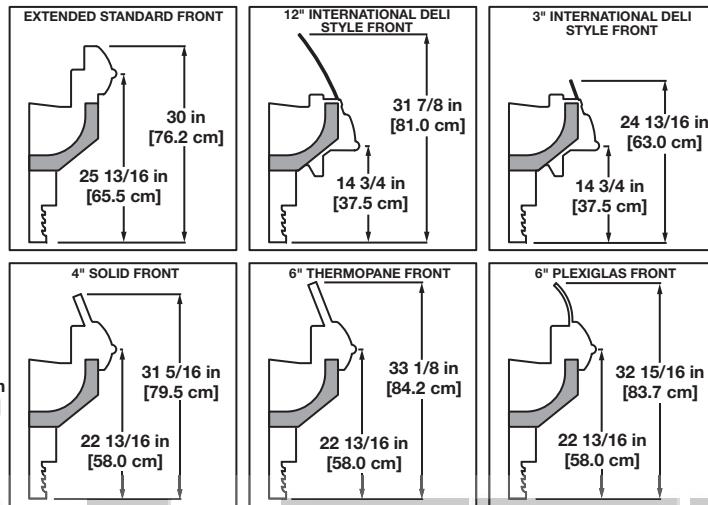
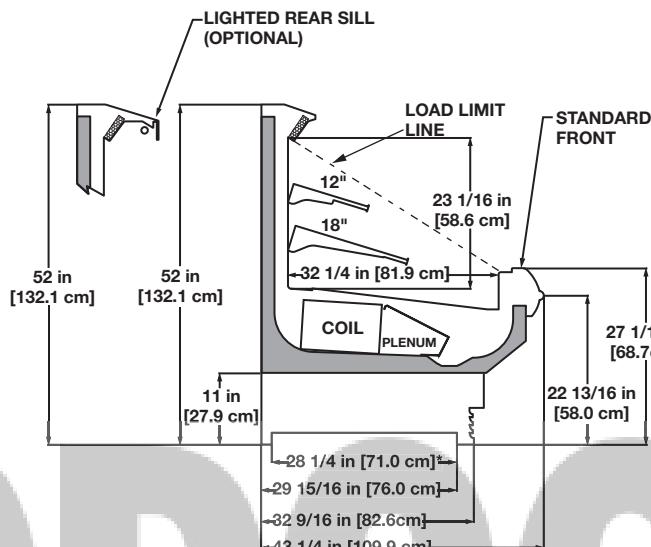


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O2.75UM
(11" BASEFRAME)

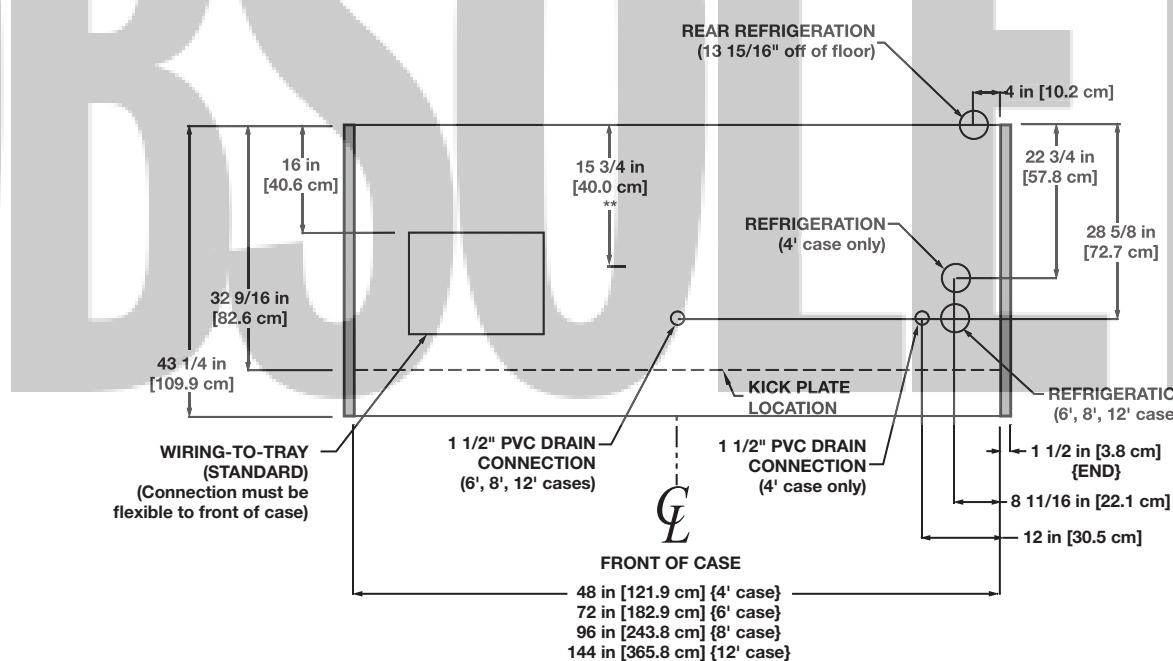
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(for additional rear sill options refer to the Merchandisers Accessories Guide)



UTILITY

Produce/Dairy/Deli/Meat/Seafood



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

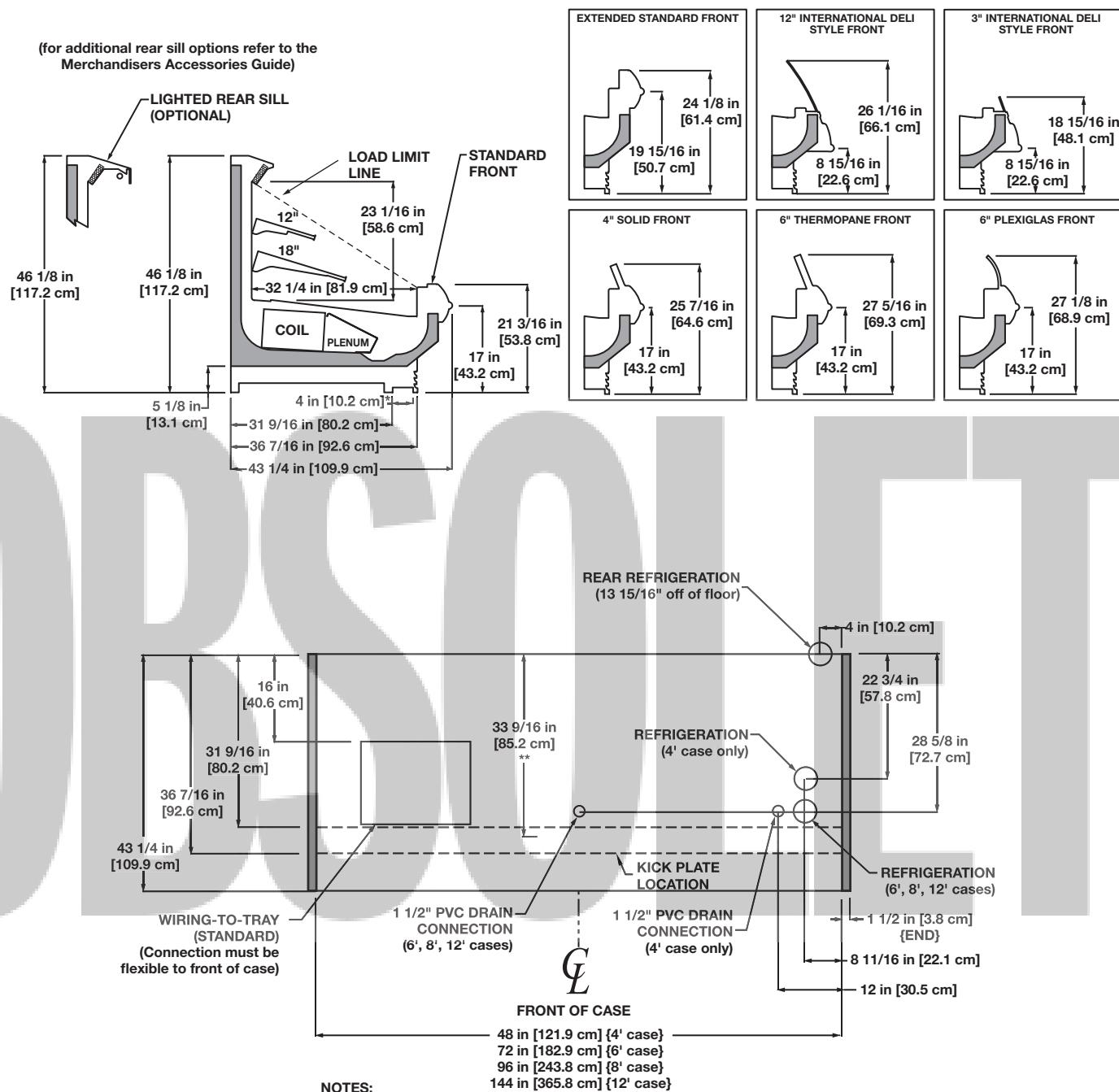
- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



O2.75UM

(5" BASEFRAME)

Hill PHOENIX
EXCELLENCE
A DOVER COMPANY



OBSOLETE

Multi-Deck Frozen Food Merchandiser

O2.75MZD - 8'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O2.75MZD-8'	3	1.02	51	0.45	33	1.45	174	15.38	3200	17.75	4260

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)				
				Standard Power (Cornice)		High Power (Cornice)		
			120 Volts	120 Volts		120 Volts		
			Amps	Watts	Amps	Watts	Amps	
O2.75MZD-8'	2	4'	0.47	56	0.20	23.8	0.44	52.4

Guidelines & Control Settings

Model	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
O2.75MZD-8' F ¹	949	3-5	-22	-8	11	340
O2.75MZD-8' MT ²	620	6-8	17	27	35	340

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O2.75MZD-8' F	4	13-15	45	65	---	---	20	60	---	---
O2.75MZD-8' MT	1	13-15	35	49	---	---	20	60	---	---

1 F = frozen food.

2 MT = medium temperature application.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

5 NOTE: "---" not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

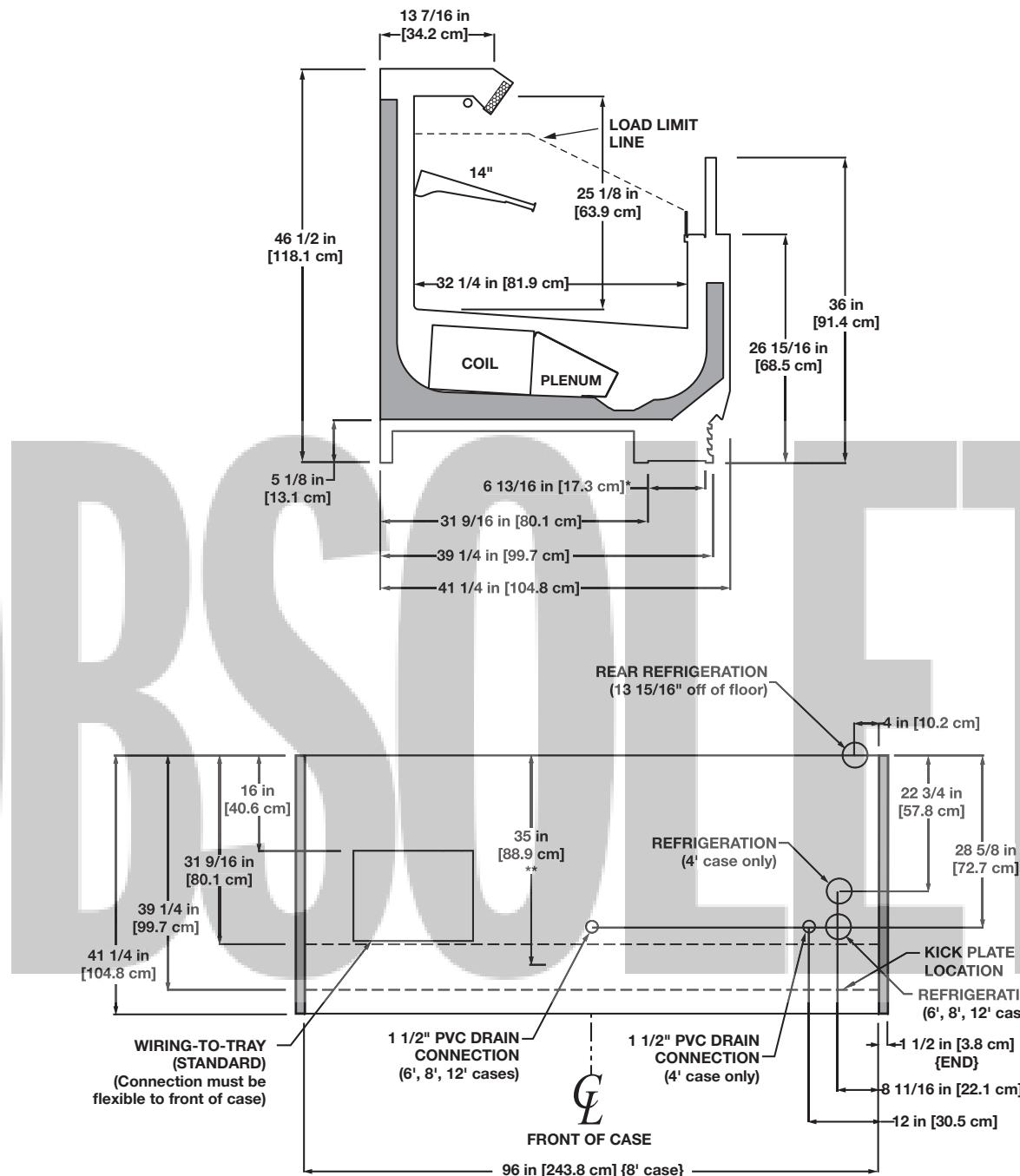
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE
A DOVER COMPANY

UTILITY

Frozen Food



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 14"
- PRODUCT ON TOP SHELF SHOULD BE 4" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-14"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Narrow Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

ON3UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ON3UM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)				
				Standard Power (Cornice or Shelf)		High Power (Cornice)		
				120 Volts		120 Volts		
ON3UM	1	4'	0.23	28	0.10	11.9	0.22	26.2
	2	3'	0.37	44	0.14	16.6	0.30	35.8
	2	4'	0.47	56	0.20	23.8	0.44	52.4
	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ON3UM	752	6-8	22	28	35	230

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON3UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model ON3UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



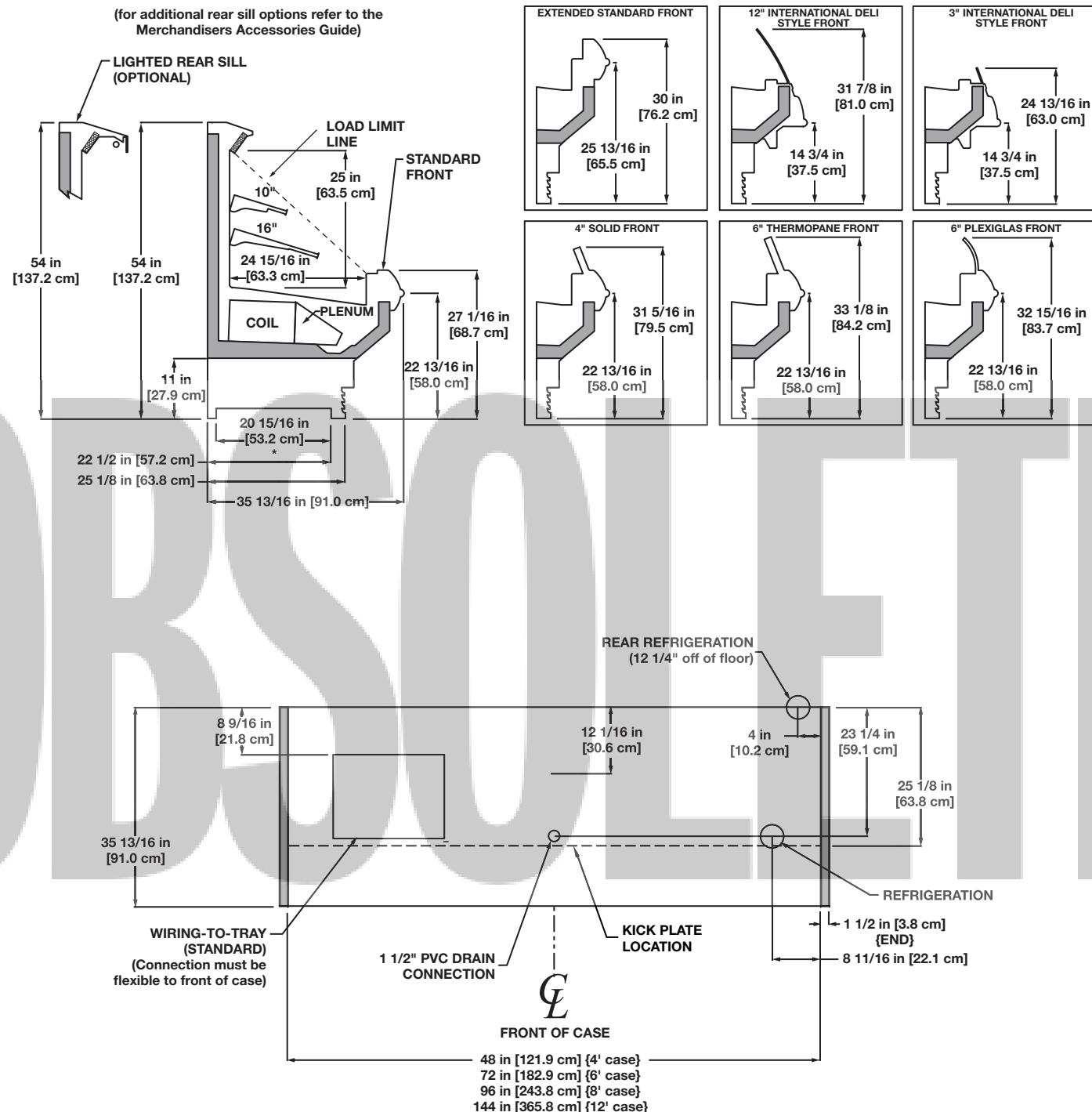
HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY

ON3UM

(11" BASEFRAME)

HILL PHOENIX®

EXCELLLENCE
A DOVER COMPANY



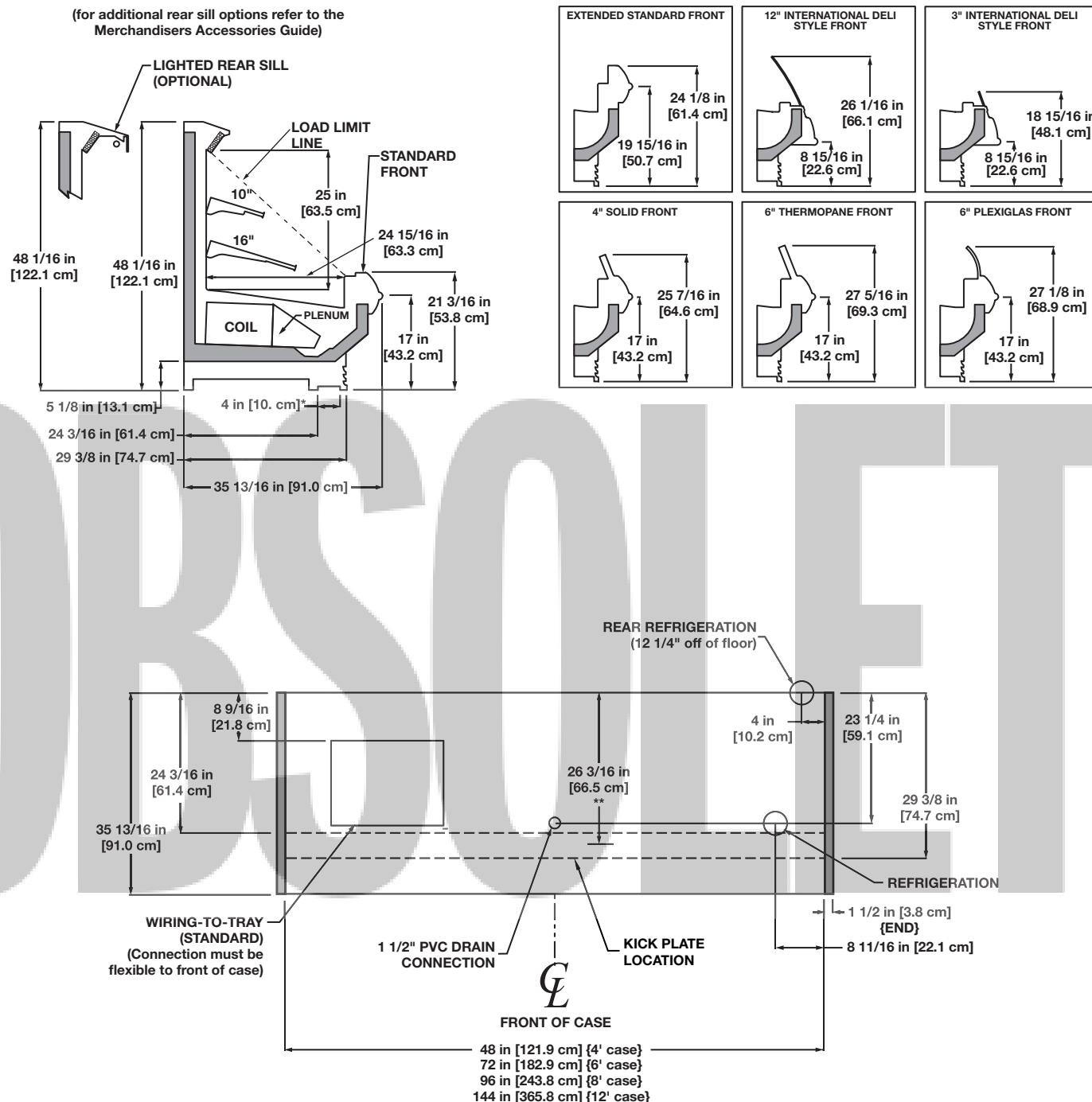
UTILITY

Produce/Dairy/Deli/Meat/Seafood



ON3UM
(5" BASEFRAME)

HILL PHOENIX
A DOVER COMPANY



NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-10" & 1-16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Multi-Deck Dairy/Deli/Produce/Meat Merchandiser with Synerg-E™

O3UM-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans	
		120 Volts	
		Amps	Watts
O3UM-NRG	4'	1	0.16
	6'	2	0.32
	8'	2	0.32
	12'	3	0.48
			33

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)			
				Standard Power (Cornice or Shelf)		High Power (Cornice)	
				120 Volts		120 Volts	
O3UM-NRG	4'	1	4'	0.23	28	0.10	11.9
	6'	2	3'	0.37	44	0.14	16.6
	8'	2	4'	0.47	56	0.20	23.8
	12'	3	4'	0.70	84	0.30	35.7
						0.66	78.6

Guidelines & Control Settings

Model	Front Sill Height	²BTUH/ft	Superheat Set Point @ Bulb (°F)		Evaporator³ (°F)	Discharge⁴ Air (°F)	Discharge⁵ Air Velocity (FPM)
			Set Point @ Bulb (°F)	Evaporator (°F)			
O3UM-NRG Dairy/Deli/Produce	All	750	6 - 8	28	31	150	
O3UM-NRG Meat	Extended¹	766	6 - 8	26	30	150	

Defrost Controls

Model	Defrost per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3UM-NRG	6	---	---	40	42	---	---	---	---

1 For meat application: extended front sills are required for maintaining proper case temperature levels (5" baseframe = 24" or higher; 11" baseframe = 30" or higher)

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.14.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

6 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.

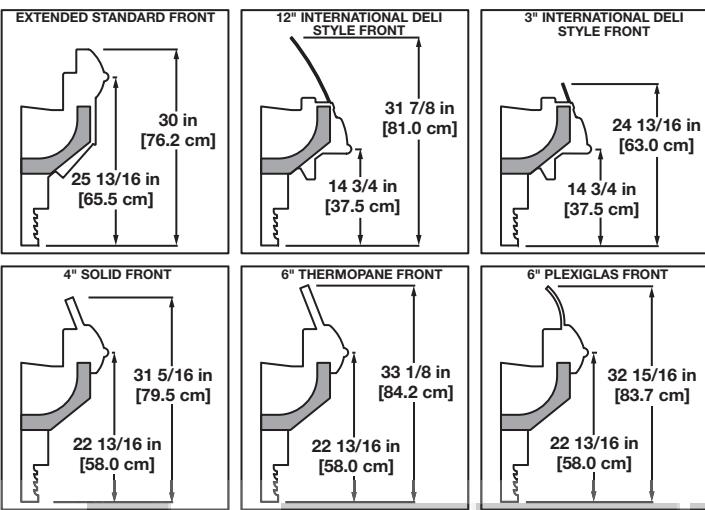
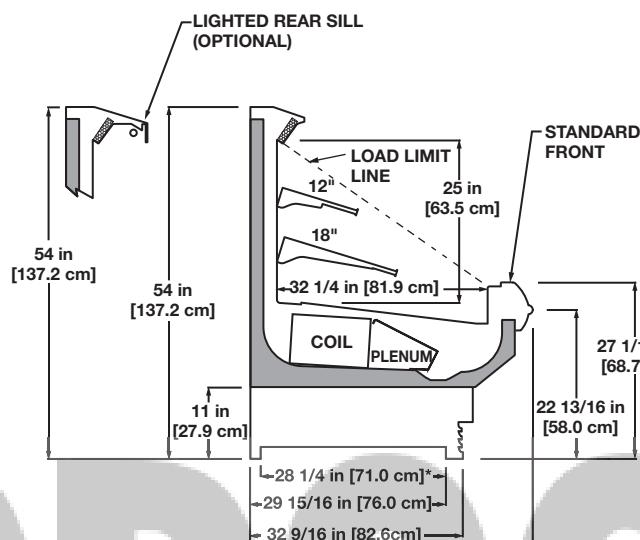


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O3UM-NRG (11" BASEFRAME)

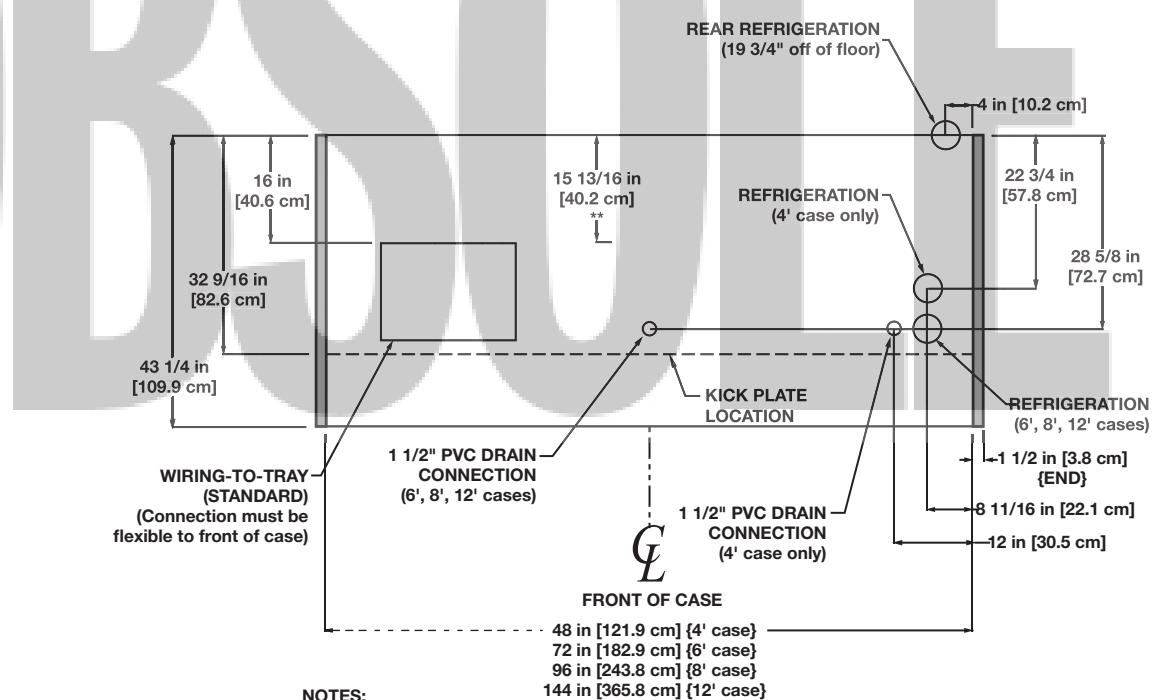
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(for additional rear sill options refer to the Merchandisers Accessories Guide)



UTILITY

Produce/Dairy/Deli/Meat



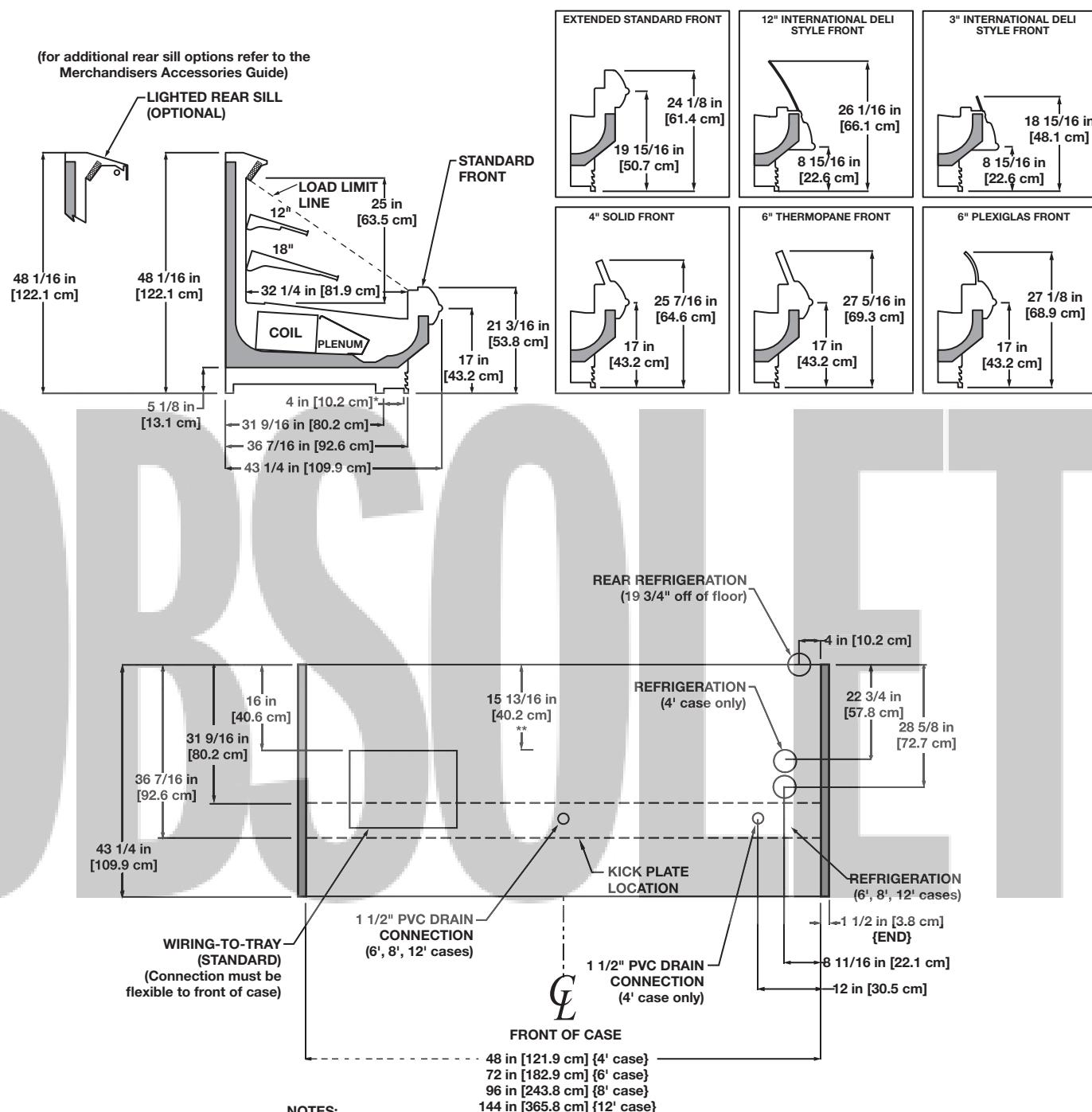
- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



O3UM-NRG

(5" BASEFRAME)

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OBSOLETE

Wide Multi-Deck Produce/Dairy/Deli Merchandiser

OW3UM - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OW3UM	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67
											1600

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)						
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)				
			120 Volts		120 Volts				
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts			
OW3UM	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
OW3UM ²	1277	6-8	22	27	45	225

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OW3UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model OW3UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

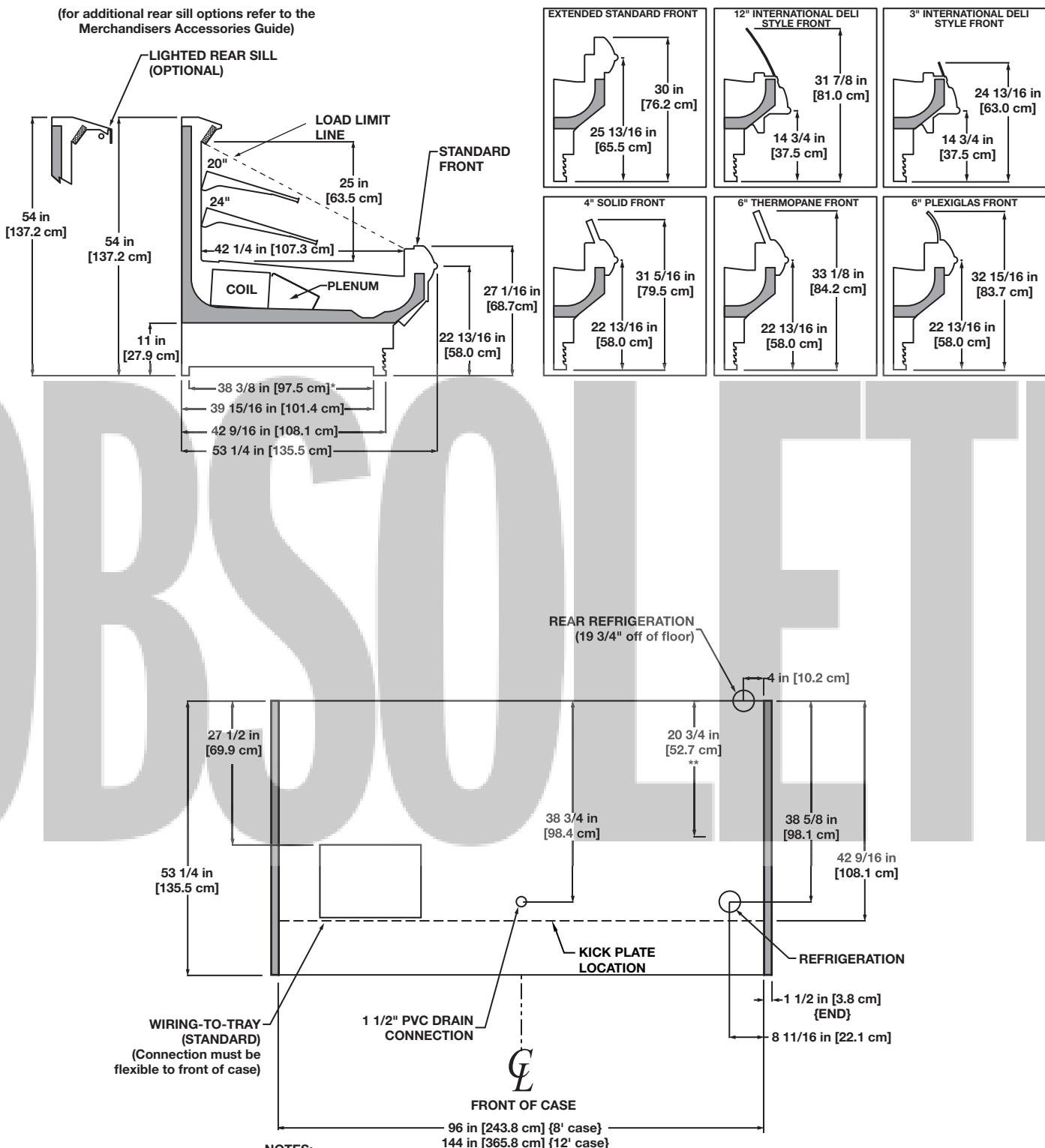
4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18", 20", 22" & 24"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-20" & 1-24"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Multi-Deck Produce/Dairy/Deli Merchandiser

O3UD - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O3UD	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
					Standard Power (Cornice or Shelf)		High Power (Cornice)		
			120 Volts		120 Volts		120 Volts		
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts	Amps	Watts	
O3UD	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ² Air Velocity (FPM)
O3UD	958	6-8	22	30	45	225

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3UD	3	6-8	40	47	45	45	26	45	45	45

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

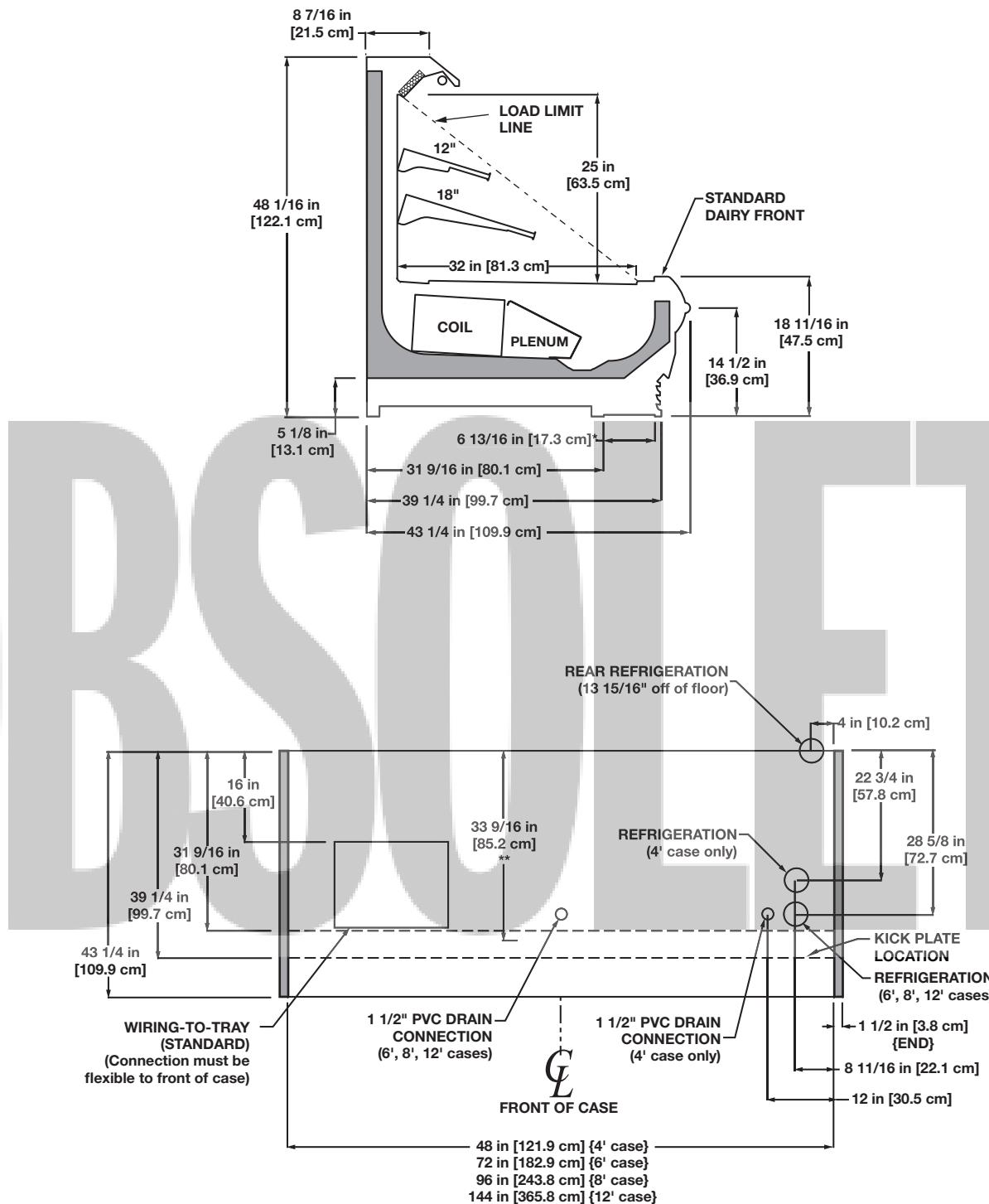
2 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Narrow Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

ON3.5UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ON3.5UM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
ON3.5UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ON3.5UM ²	927	6-8	22	28	35	204

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON3.5UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model ON3.5UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

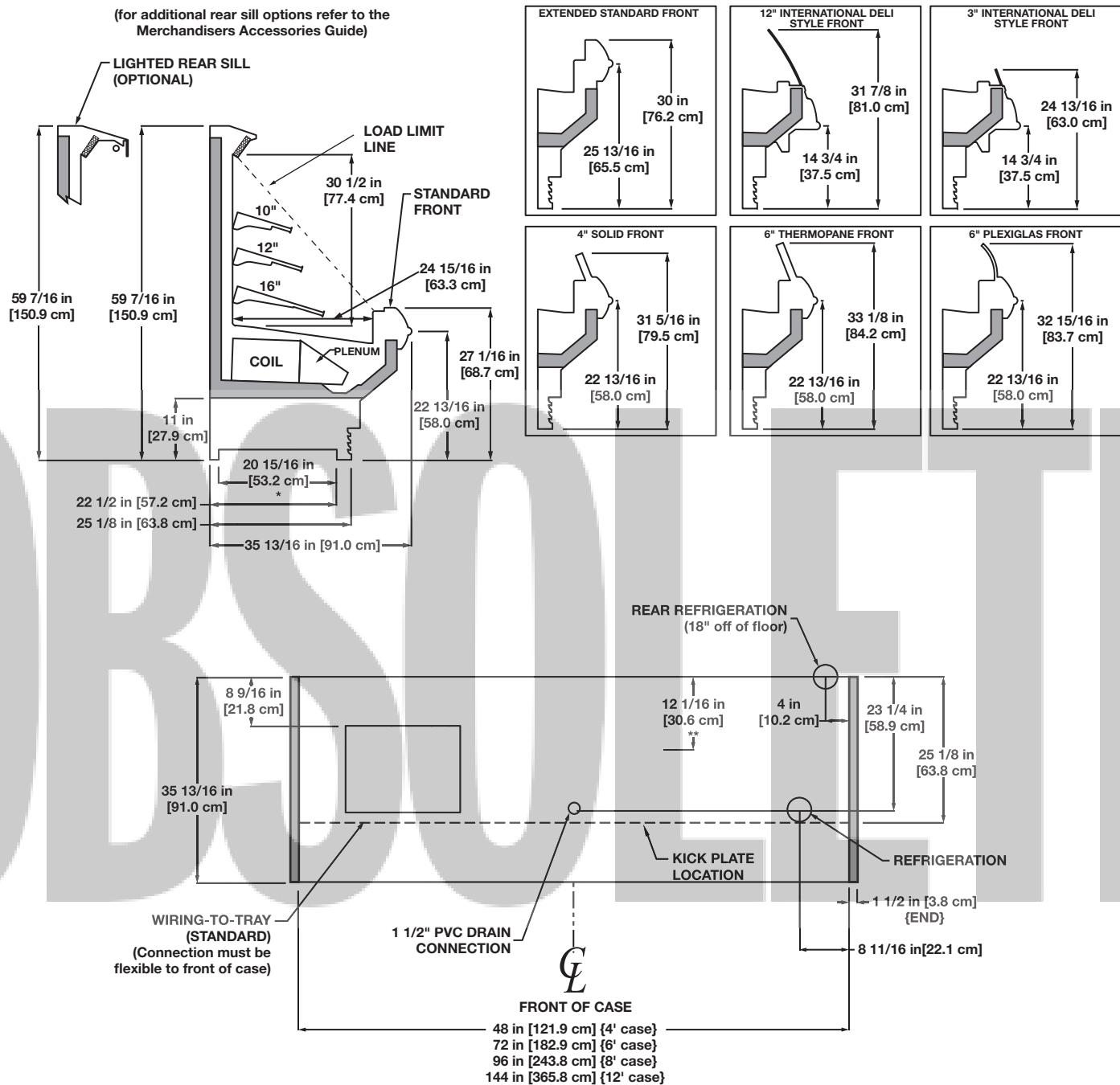
All measurements are taken per ARI 1200 - 2002 specifications.



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ON3.5UM
(11" BASEFRAME)

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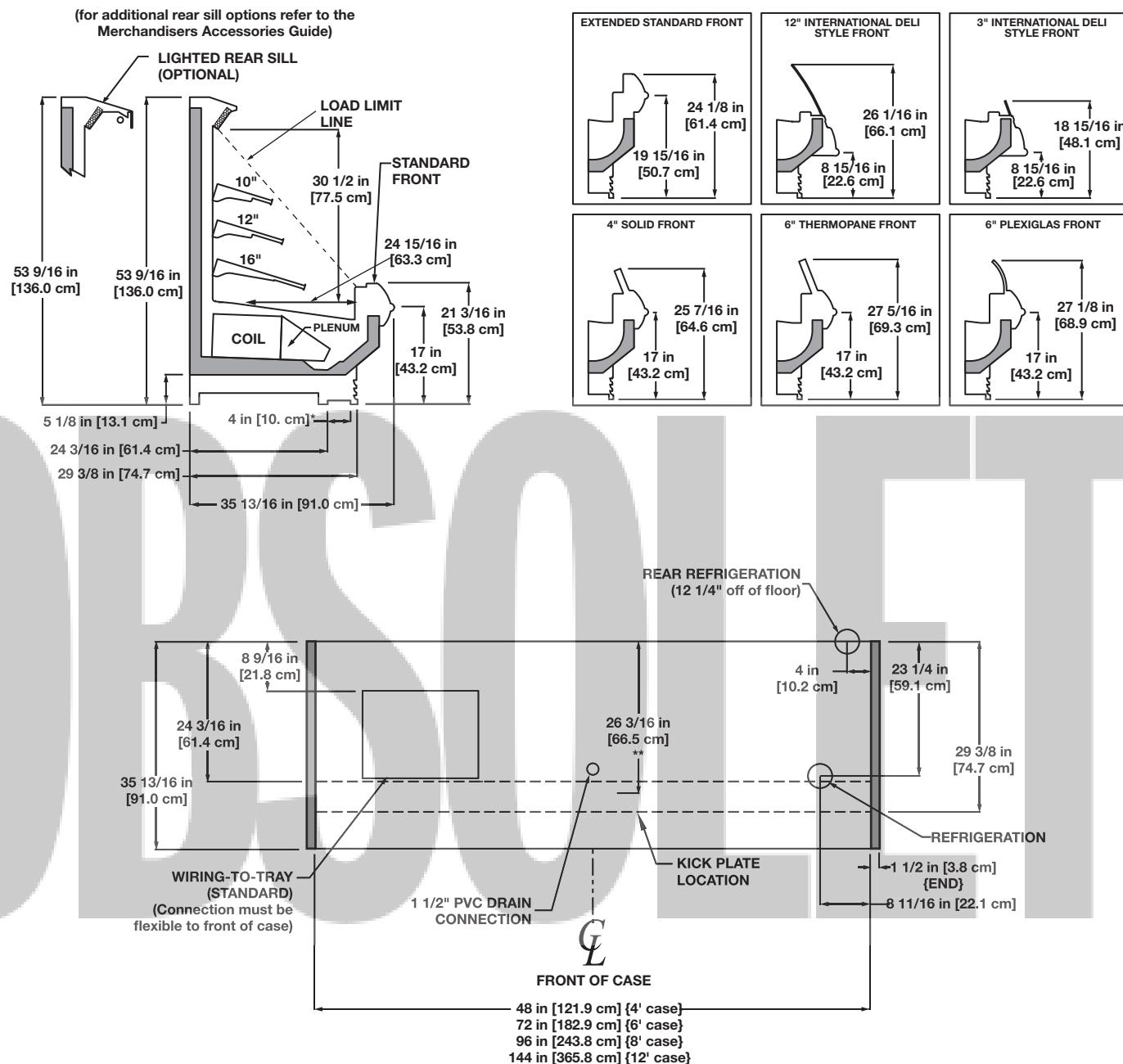
UTILITY
Produce/Dairy/Deli/Meat/Seafood



ON3.5UM

(5" BASEFRAME)

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OBSOLETE

Multi-Deck Produce/Dairy/Deli/Meat/Seafood Merchandiser

O3.5UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O3.5UM	4'	2	1.00	60	0.39	23.4	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.39	23.4	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.59	35.1	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.78	46.8	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
O3.5UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
O3.5UM ²	1208	6-8	22	30	45	300

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3.5UM	3	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model O3.5UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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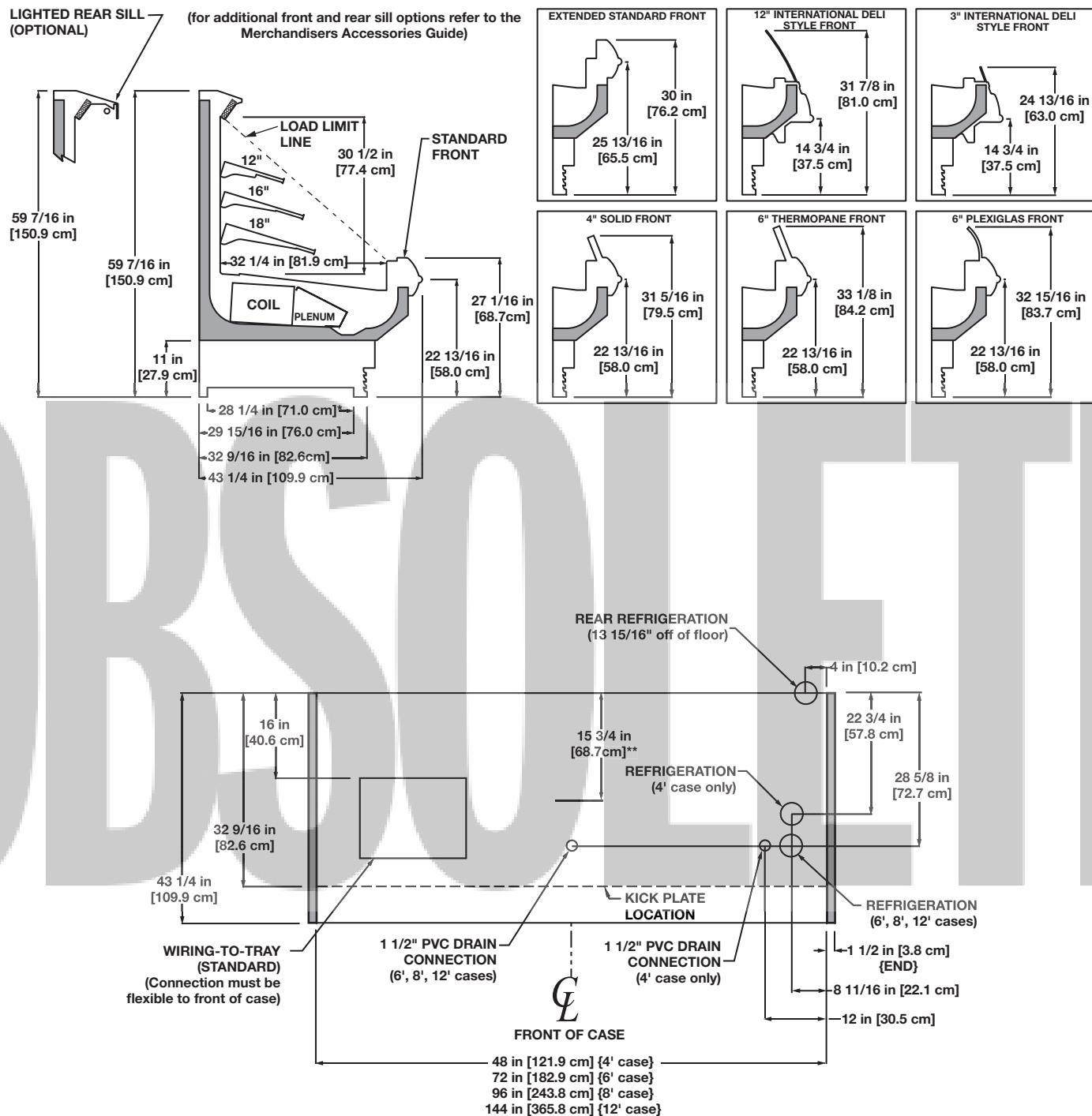
O3.5UM

(11" BASEFRAME)

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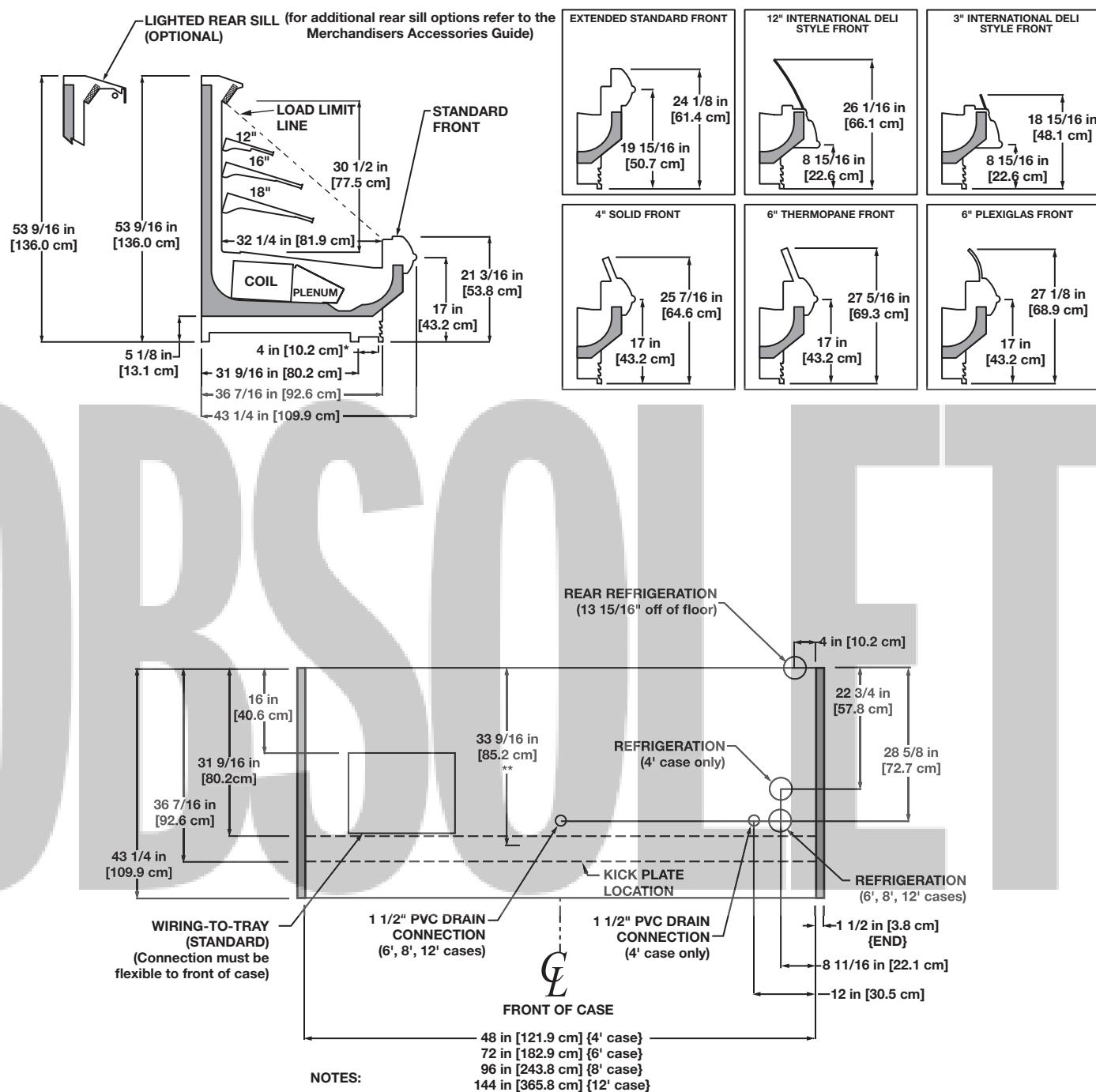
UTILITY

Produce/Dairy/Deli/Meat/Seafood



O3.5UM
(5" BASEFRAME)

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OBSOLETE

Multi-Deck Produce/Dairy/Deli Merchandiser

O3.5UD - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O3.5UD	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
					Standard Power (Cornice or Shelf)		High Power (Cornice)		
			120 Volts		120 Volts		120 Volts		
O3.5UD	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ² Air Velocity (FPM)
O3.5UD	1208	6-8	22	30	45	300

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3.5UD	3	6-8	40	47	45	45	26	45	45	45

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

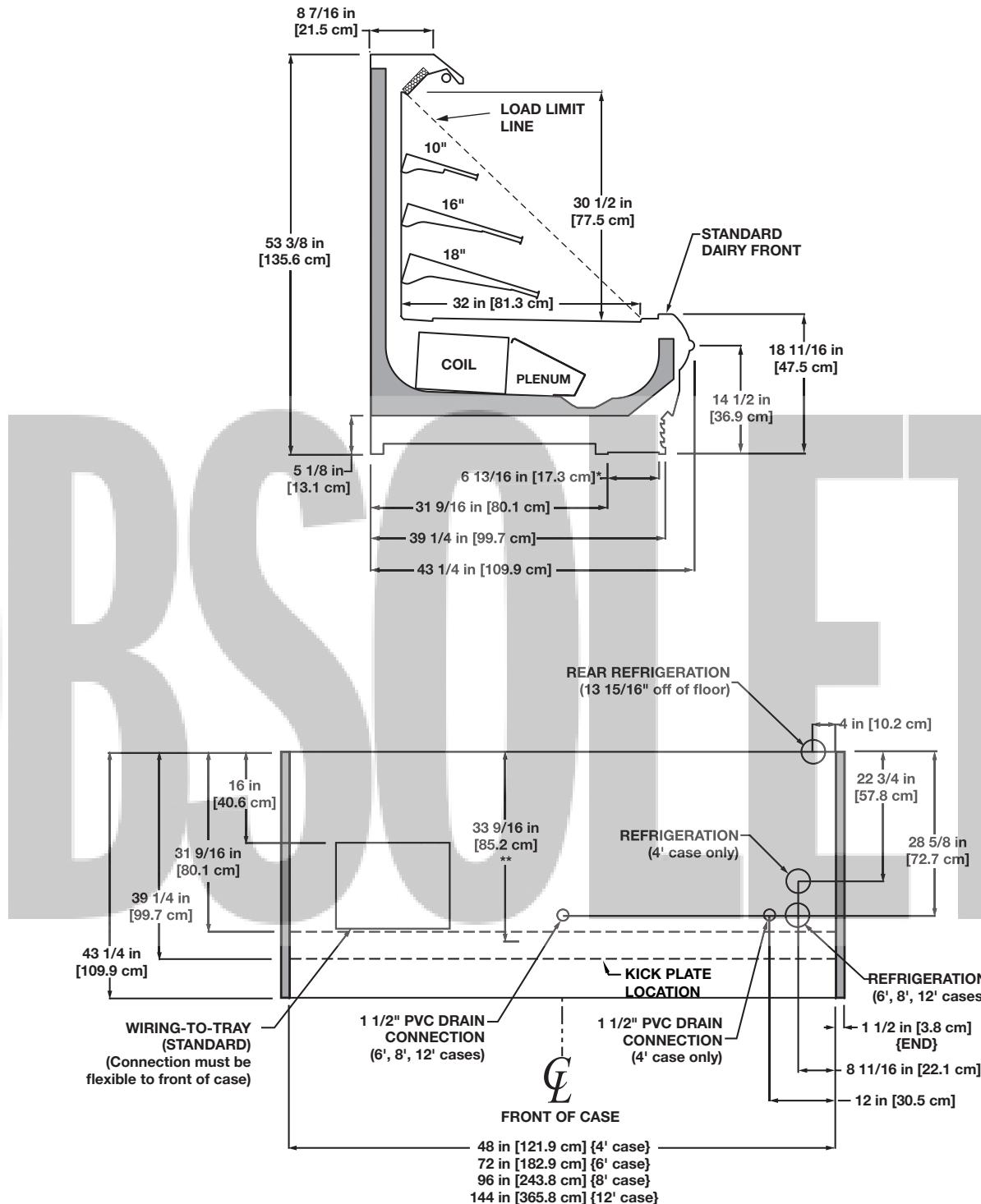
2 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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Narrow Multi-Deck Produce/Dairy/Deli Merchandiser

ON4UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ON4UM	4'	2	1.00	60	0.15	9.2	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.15	9.2	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.23	13.8	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.31	18.4	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts		120 Volts		120 Volts		
ON4UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	³ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ON4UM ²	1043	6-8	22	31	33	203

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON4UM	4	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model ON4UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.13.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.

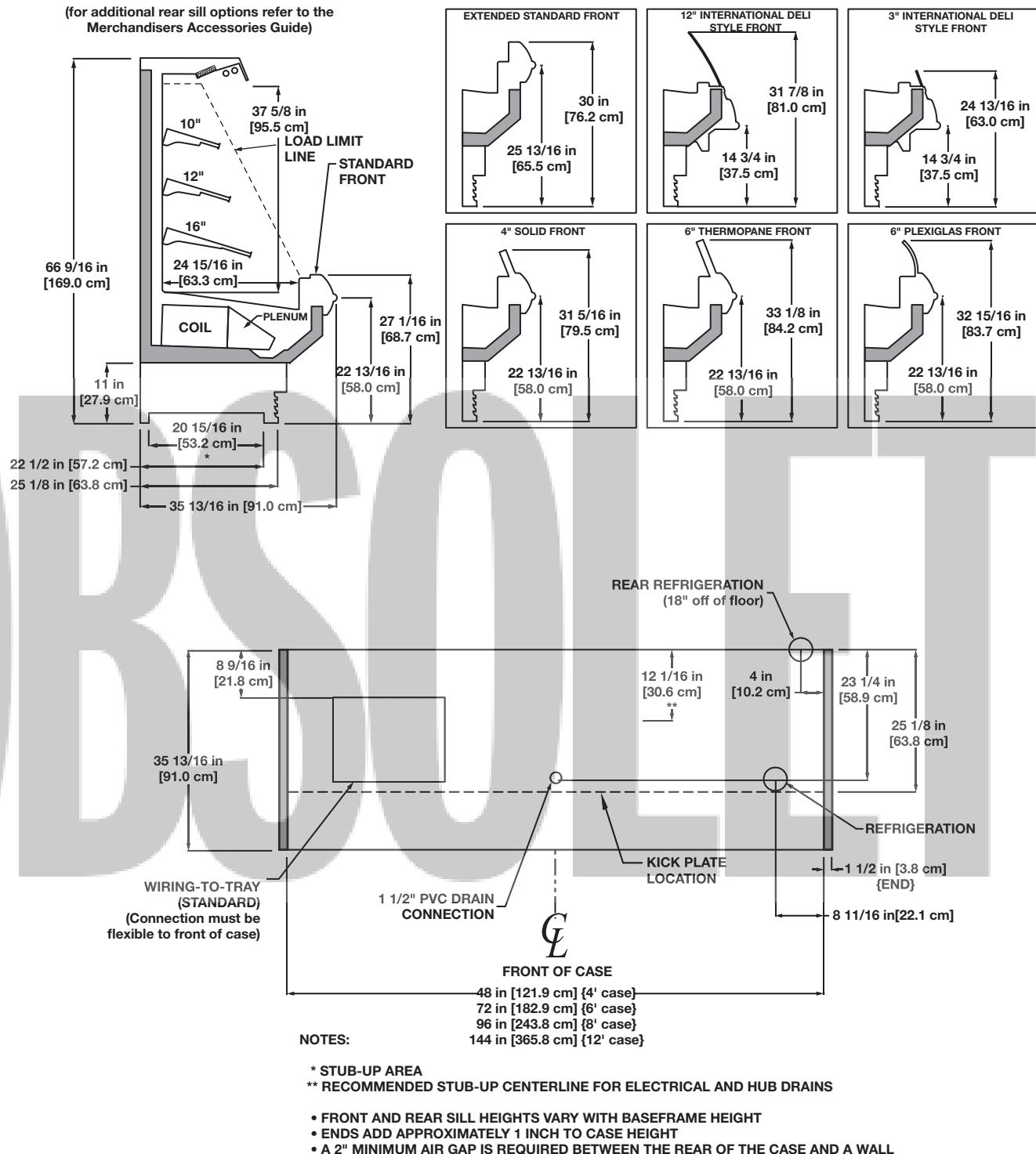


HILL PHOENIX
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ON4UM
(11" BASEFRAME)

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(for additional rear sill options refer to the Merchandisers Accessories Guide)



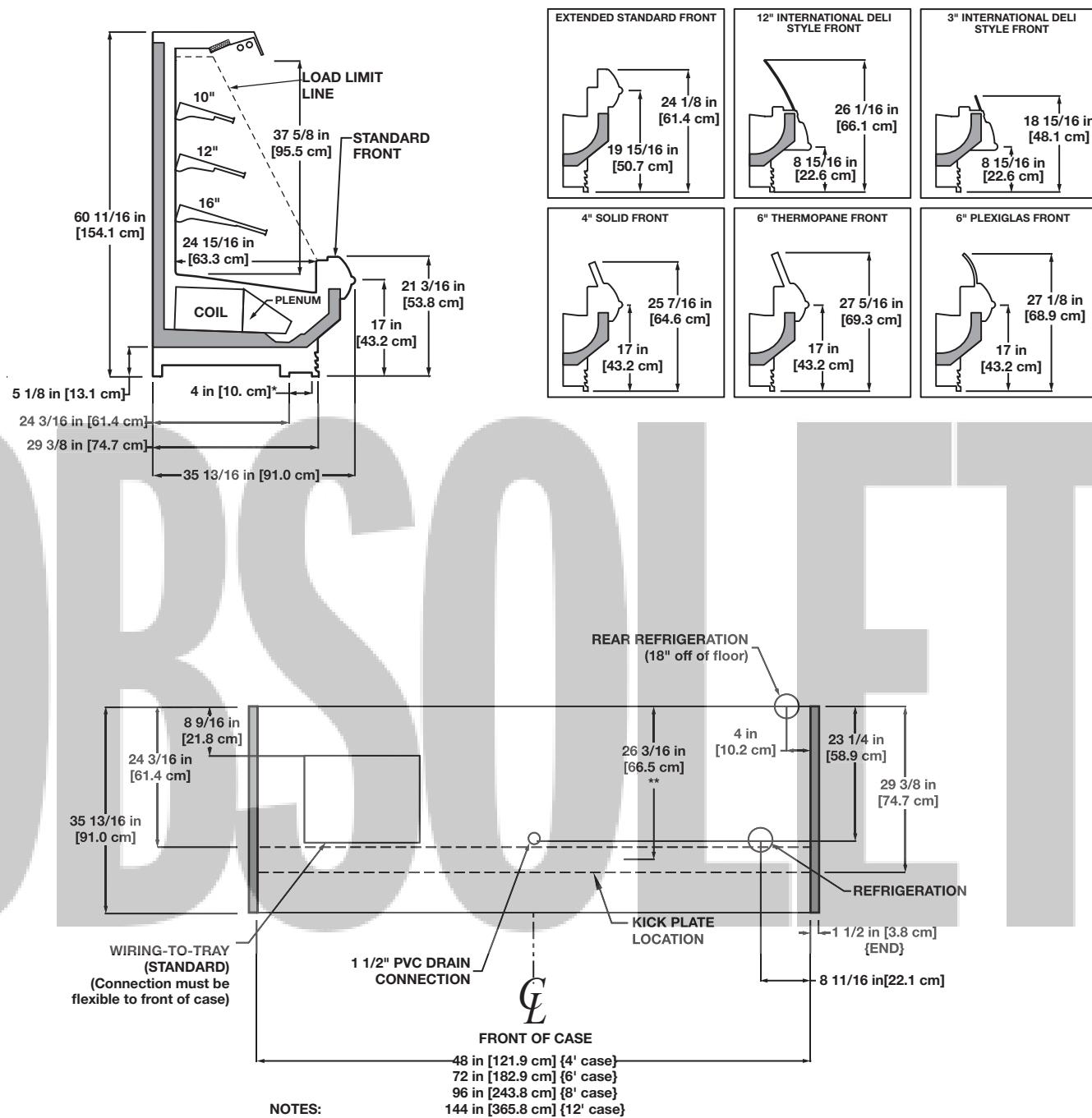
UTILITY

Produce/Dairy/Deli



ON4UM
(5" BASEFRAME)

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- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-10", 1-12" & 1-16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Multi-Deck Dairy/Deli/Produce/Meat Merchandiser with Synerg-E™

O4UM-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans	
		120 Volts	
		Amps	Watts
O4UM-NRG	4'	1	0.2
	6'	2	0.4
	8'	2	0.4
	12'	3	0.6
			42

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)			
				Standard Power (Cornice or Shelf)		High Power (Cornice)	
				120 Volts	120 Volts	120 Volts	120 Volts
O4UM-NRG	4'	1	4'	0.23	28	0.10	11.9
	6'	2	3'	0.37	44	0.14	16.6
	8'	2	4'	0.47	56	0.20	23.8
	12'	3	4'	0.70	84	0.30	35.7
						0.66	78.6

Guidelines & Control Settings

Model	Front Sill Height	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ³ (°F)	Discharge ⁴ Air (°F)	Discharge Air Velocity (FPM) ⁵
O4UM-NRG Dairy/Deli/Produce	All	930	6 - 8	28	31	160
O4UM-NRG Meat	Extended ¹	920	6 - 8	26	30	160

Defrost Controls

Model	Defrost per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O4UM-NRG	6	---	---	30	42	---	---	---	---

1 For meat application: extended front sills are required for maintaining proper case temperature levels (5" baseframe = 24" or higher; 11" baseframe = 30" or higher)

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.14.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

6 NOTE: “---” not an option on this case model.

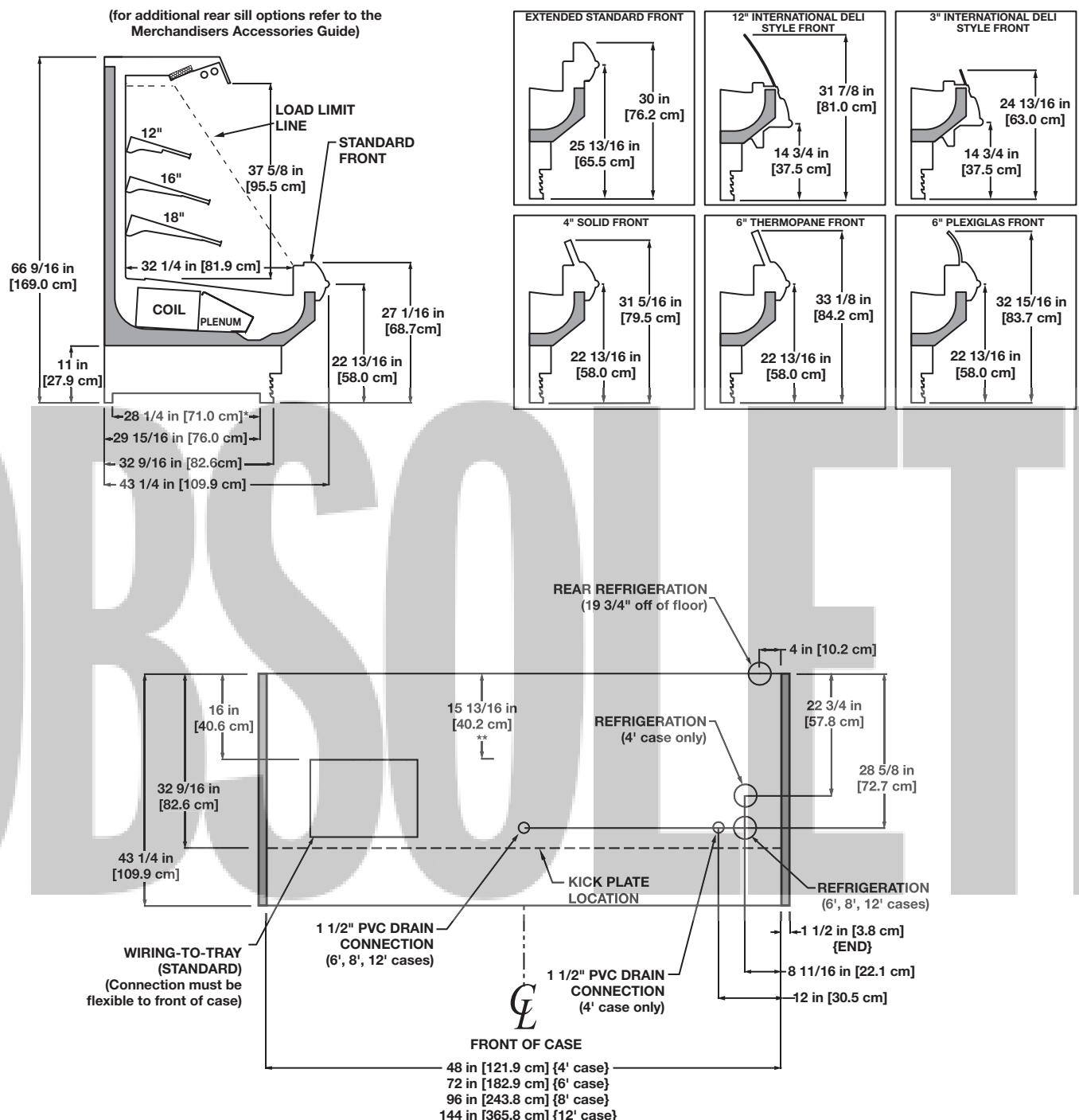
All measurements are taken per ARI 1200 - 2002 specifications.



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O4UM-NRG
(11" BASEFRAME)

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UTILITY

Produce/Dairy/Deli/Meat

NOTES:

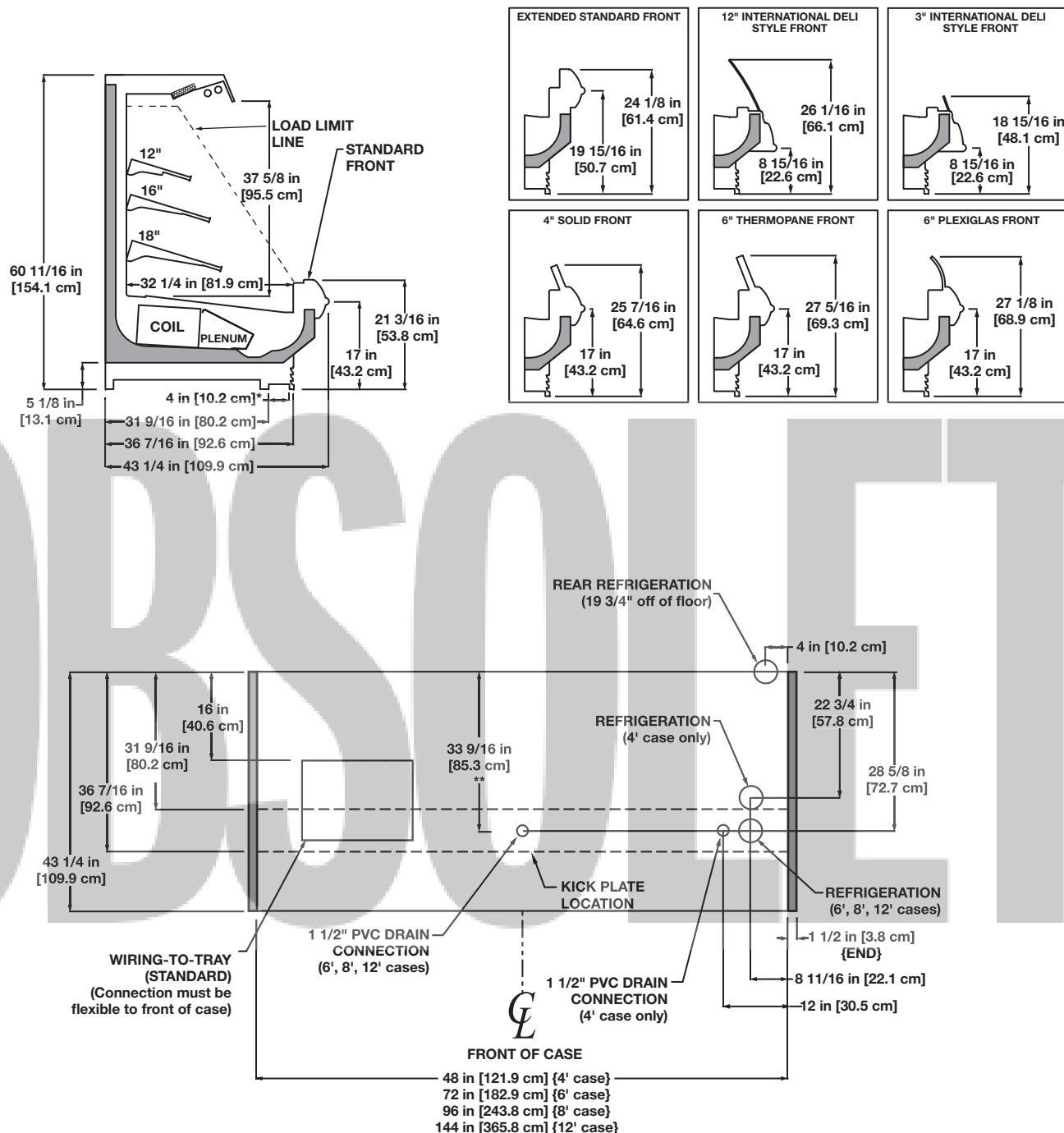
- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12", 1-16" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



O4UM-NRG
(5" BASEFRAME)

HILL PHOENIX
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NOTES:

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- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
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- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12", 1-16" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Narrow Multi-Deck Produce/Dairy/Deli Merchandiser

ON5UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ON5UM	4'	2	1.00	60	0.39	23.4	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.39	23.4	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.59	35.1	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.78	46.8	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts		120 Volts		120 Volts		
ON5UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ON5UM ²	1093	6-8	22	31	43	240

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON5UM	4	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model ON5UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.13.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

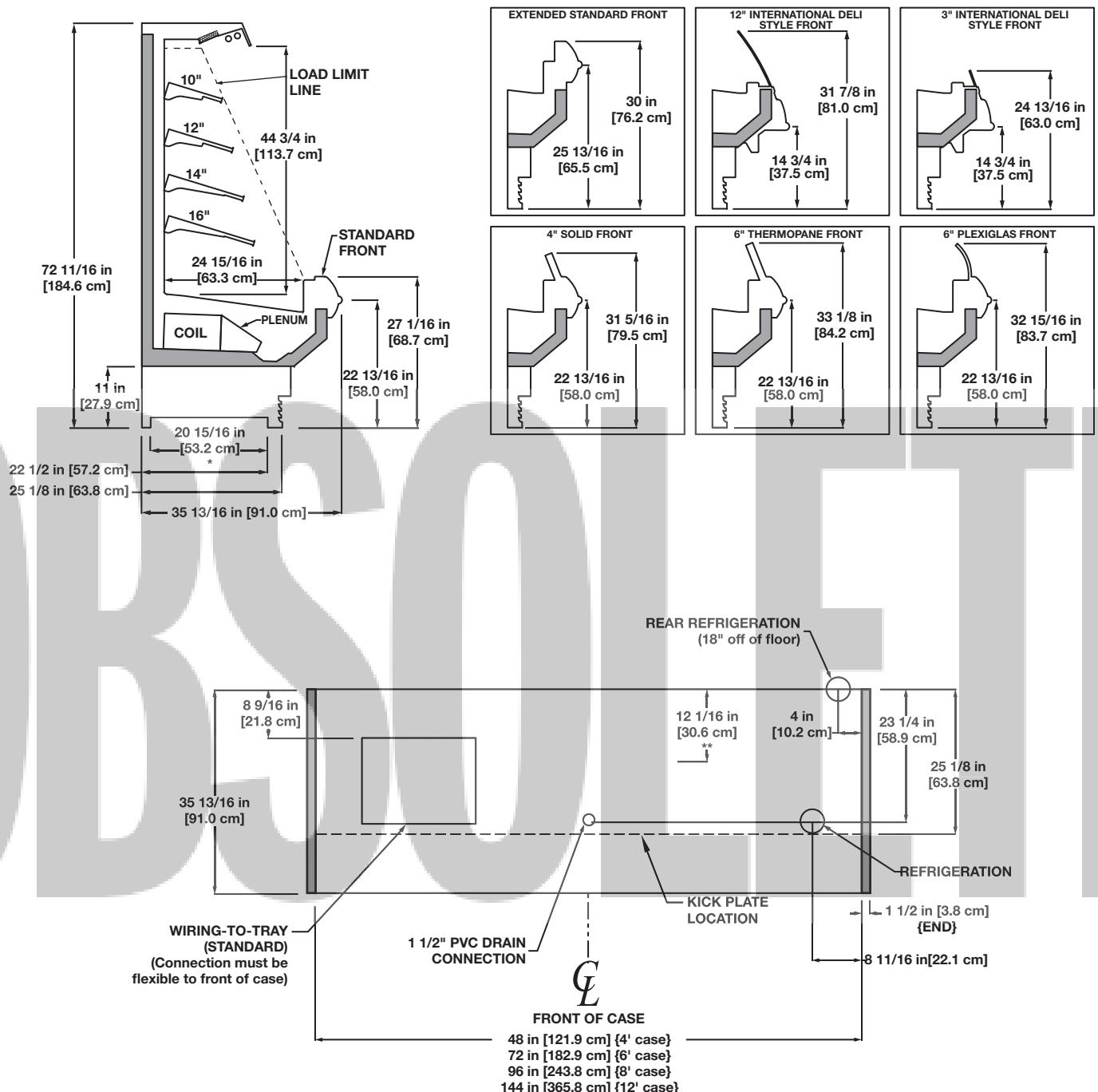
All measurements are taken per ARI 1200 - 2002 specifications.



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EXCELLLENCE
A DOVER COMPANY

ON5UM
(11" BASEFRAME)

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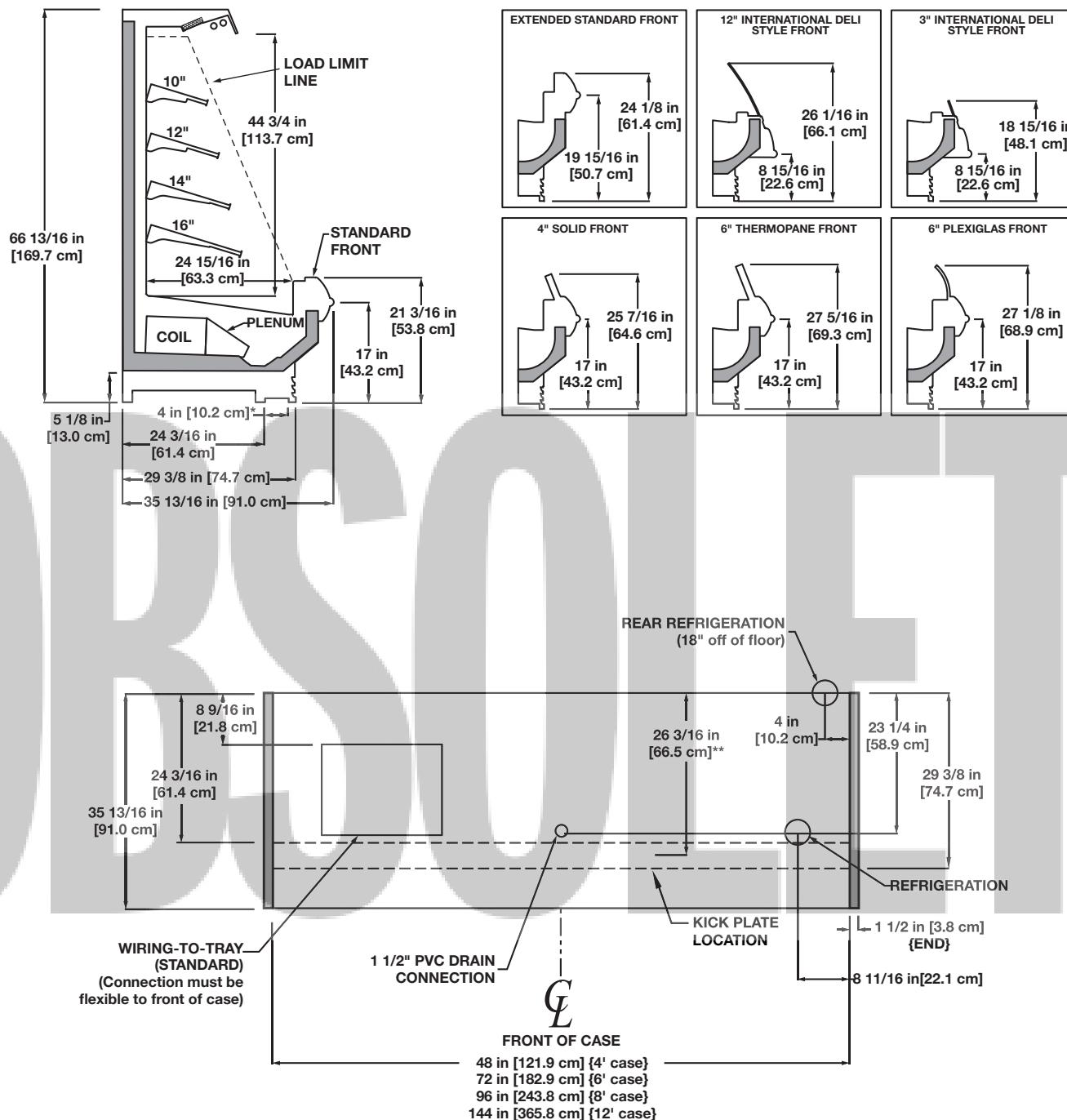
UTILITY

Produce/Dairy/Deli



ON5UM
(5" BASEFRAME)

HILL PHOENIX
EXCELLENCE
A DOVER COMPANY



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-10", 1-12", 1-14" & 1-16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Multi-Deck Produce/Dairy/Deli Merchandiser

O5UM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O5UM	4'	2	1.00	60	0.39	23.4	0.14	17	1.92	400	2.22	532
	6'	2	1.00	60	0.39	23.4	0.20	24	2.88	600	3.33	798
	8'	3	1.50	90	0.59	35.1	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.78	46.8	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Amps	Watts	Amps	Watts		
O5UM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
O5UM ²	1378	6-8	22	30	42	300

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O5UM	4	6-8	40	47	45	45	26	45	45	45

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model O5UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.13.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

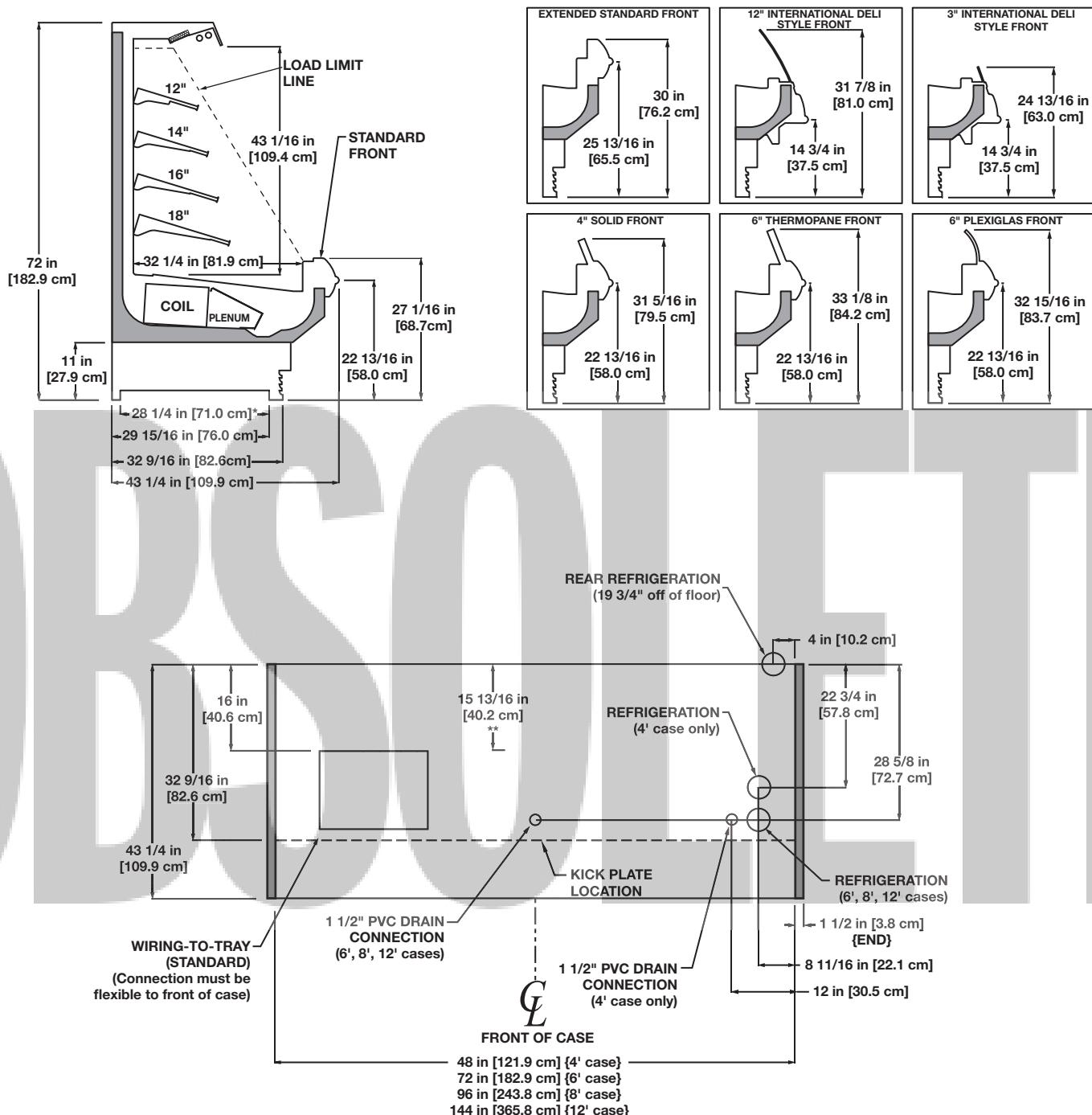
4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY

**NOTES:**

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
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- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



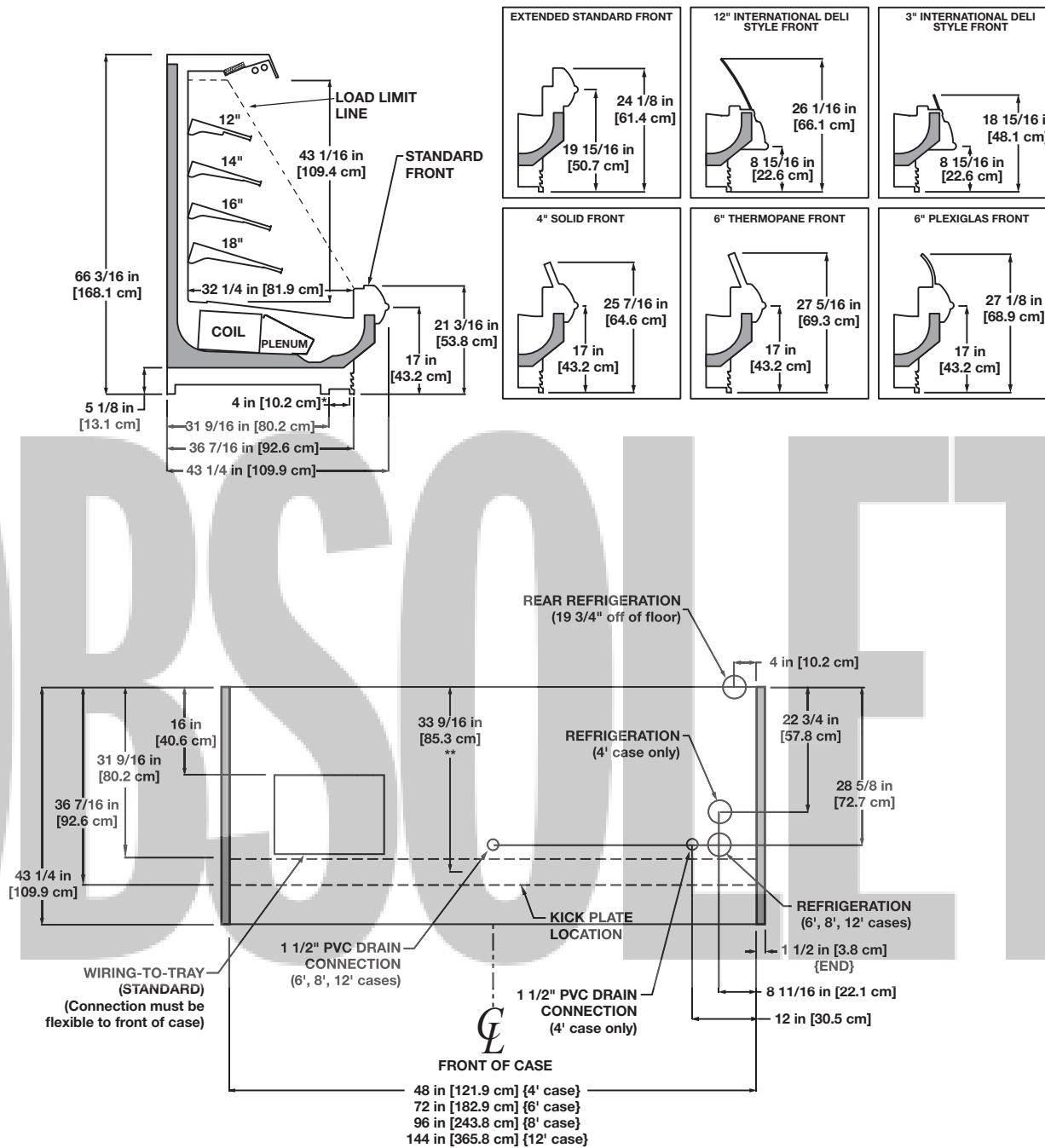
O5UM

(5" BASEFRAME)

HILL PHOENIX

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A DOVER COMPANY



NOTES:

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- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Narrow Multi-Deck Produce/Dairy/Deli Merchandiser

ON6UM - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ON6UM	8'	3	1.50	90	0.70	42	0.25	30	3.85	800	4.44	1065
	12'	4	2.00	120	0.93	56	0.38	46	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice)		High Power (Cornice)			
			120 Volts		120 Volts		120 Volts		
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts	Amps	Watts	
ON6UM	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	³ BTUH/ft	Superheat Set Point @Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ON6UM ²	960	6-8	22	28	40	300

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON6UM	4	6-8	35	48	---	---	26	45	---	---

1 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

2 Model ON6UM only available for meat application with a thermopane-glass front or a curved plexiglass front.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.11.
- Listed case BTUH/ft indicates unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

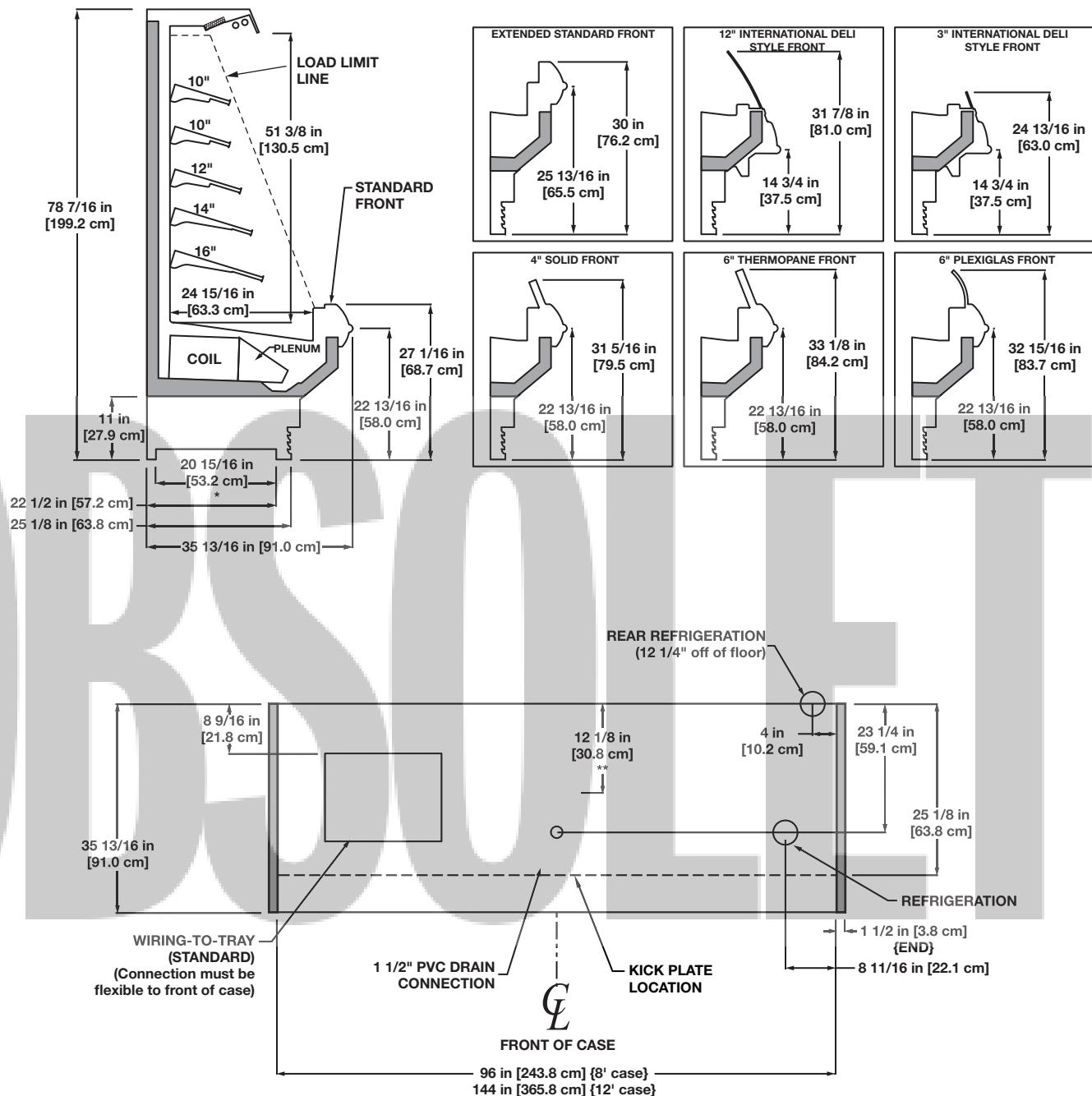
All measurements are taken per ARI 1200 - 2002 specifications.



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A DOVER COMPANY

ON6UM
(11" BASEFRAME)

HILL PHOENIX®
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UTILITY

Produce/Dairy/Deli

NOTES:

* STUB-UP AREA

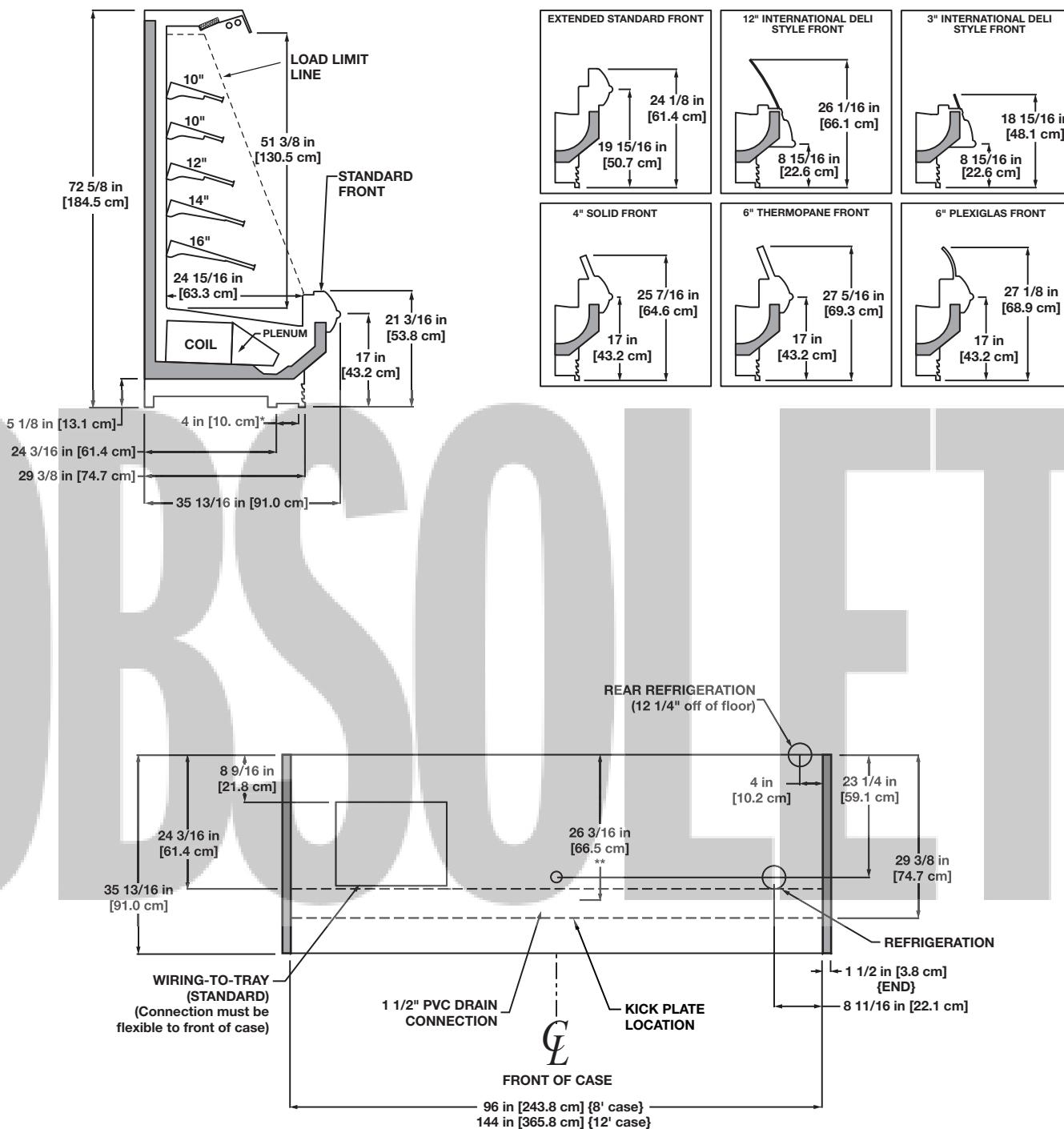
** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



ON6UM
(5" BASEFRAME)

HILL PHOENIX®
EXCELLENCE
A DOVER COMPANY



NOTES:

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- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
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OBSOLETE

Multi-Deck Dairy/Deli/Produce/Meat Merchandiser with Synerg-E™

O6UM-NRG - 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans	
		120 Volts	
		Amps	Watts
O6UM-NRG	6'	2	0.4 28
	8'	2	0.4 28
	12'	3	0.6 42

Lighting Data

Model	Bulbs per Row	Bulb Length	BTUH Load per Bulb	Typical per Light Row		Maximum Lighting	
				120 Volts		120 Volts	
				Amps	Watts	Amps	Watts
O6UM-NRG	6'	2	3'	80	0.37	44	2.57 308
	8'	2	4'	80	0.47	56	3.27 392
	12'	3	4'	80	0.70	84	4.90 588

Guidelines & Control Settings

Model	Front Sill Height	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ³ (°F)	Discharge ⁴ Air (°F)	Discharge ⁵ Air Velocity (FPM)
O6UM-NRG Dairy/Deli/Produce	All	1070	6 - 8	28	31	160
O6UM-NRG Meat	Extended ¹	1064	6 - 8	26	30	160

Defrost Controls

Model	Defrost per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O6UM-NRG	6	---	---	30	42	---	---	---	---

1 For meat application: extended front sills are required for maintaining proper case temperature levels (5" baseframe = 24" or higher; 11" baseframe = 30" or higher)

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.14.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

6 NOTE: “---” not an option on this case model.

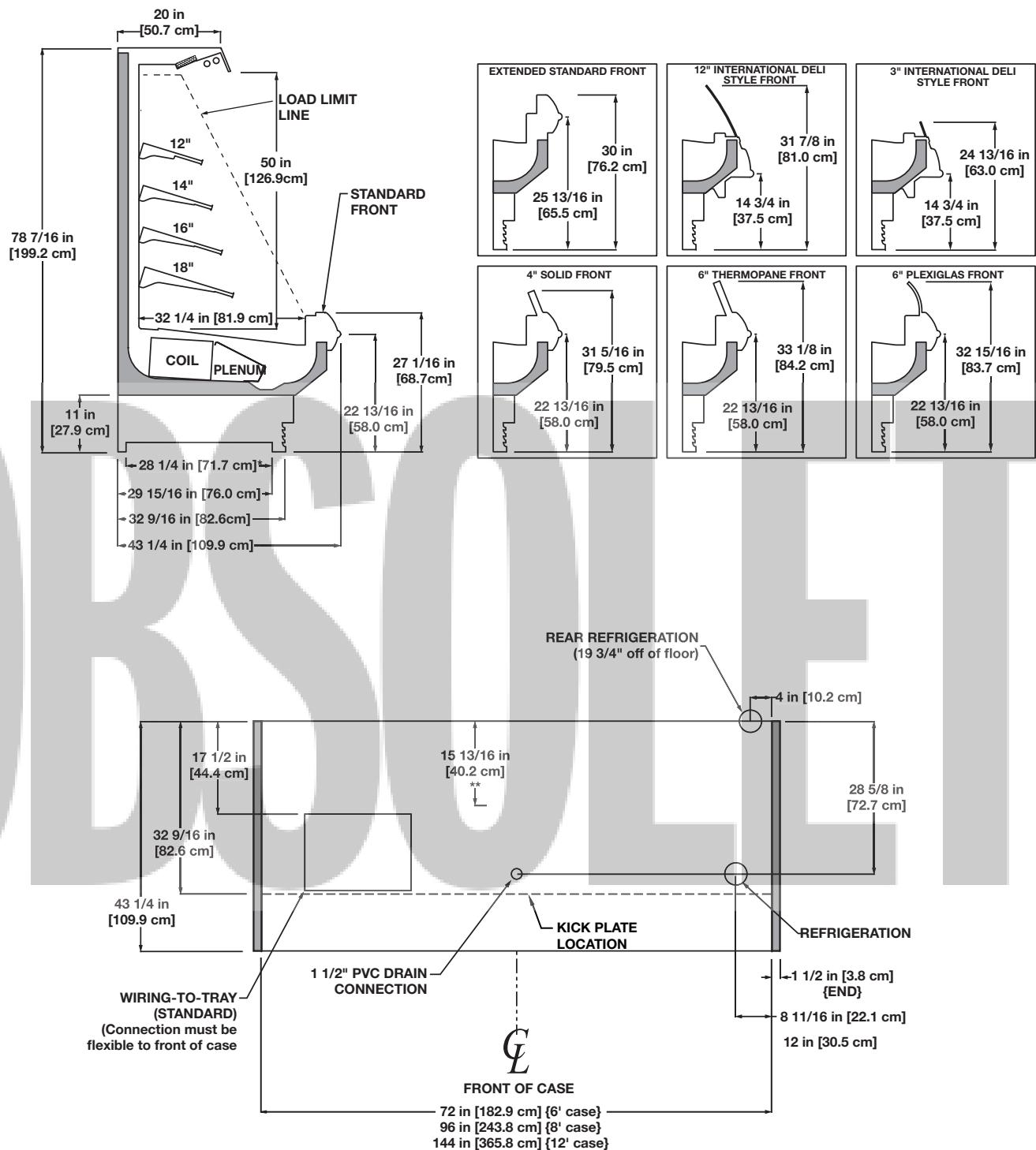
All measurements are taken per ARI 1200 - 2002 specifications.



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O6UM-NRG
(11" BASEFRAME)

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UTILITY

Produce/Dairy/Deli/Meat



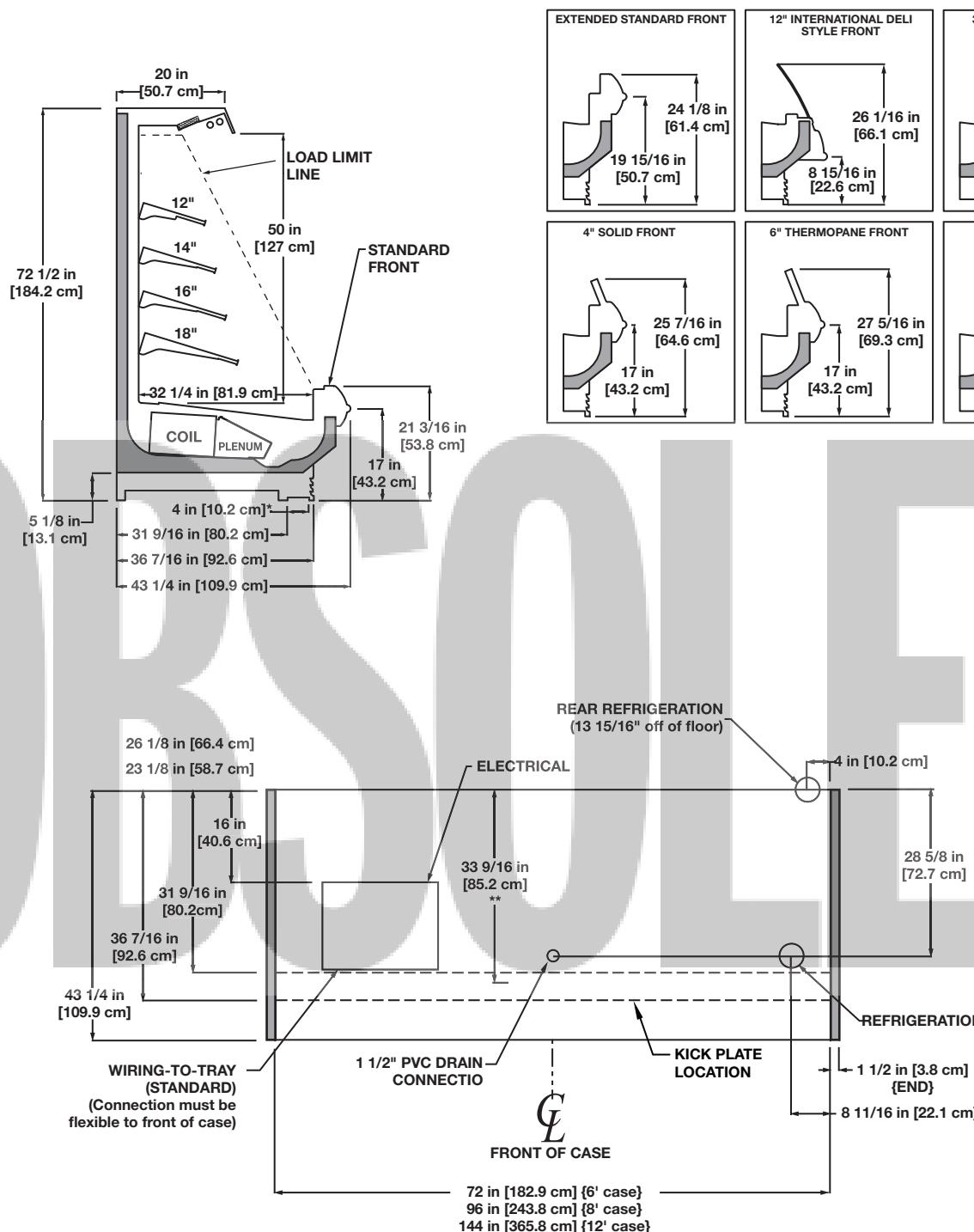
NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (6") - 5/8", SUCTION LINE (8" & 12") - 7/8", LIQUID LINE (ALL LENGTHS) - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12", 1-14", 1-16" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

O6UM-NRG
(5" BASEFRAME)

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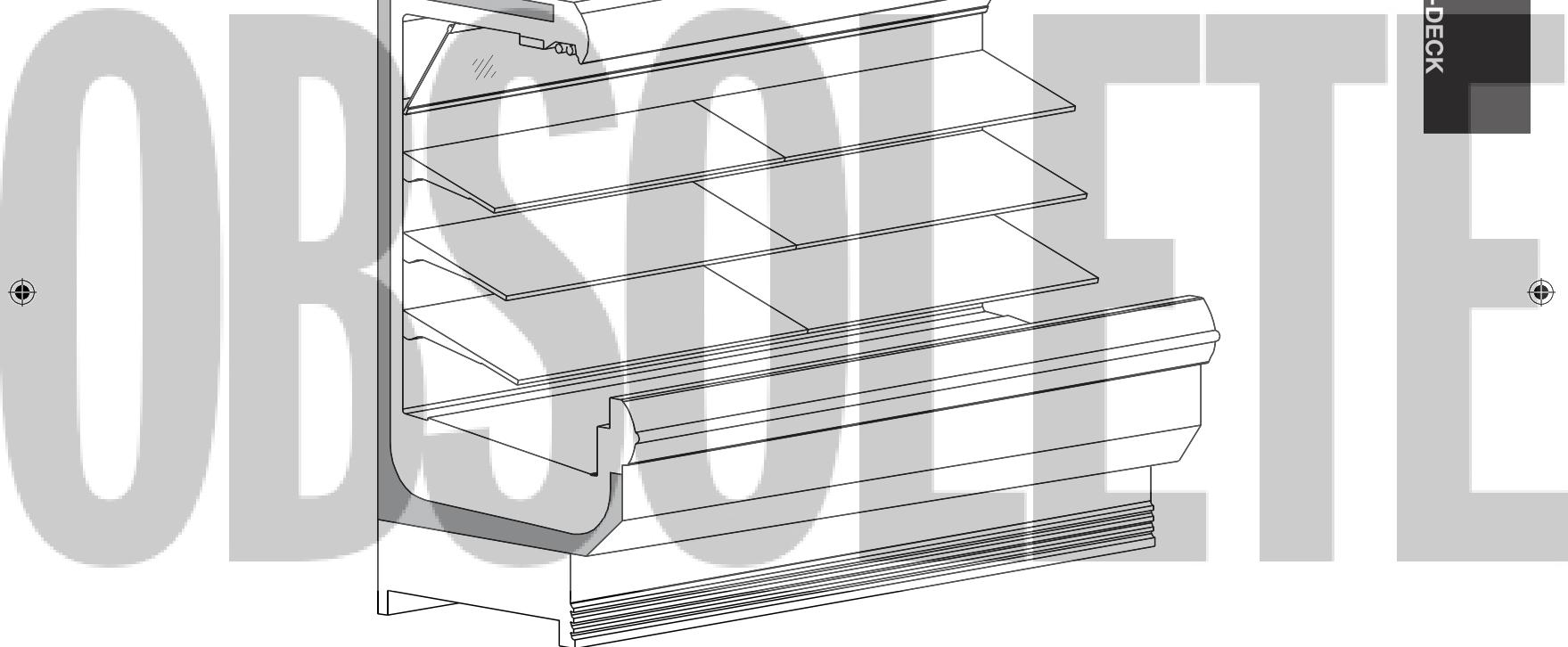
NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT AND REAR SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (6') - 5/8", SUCTION LINE (8' & 12') - 7/8", LIQUID LINE (ALL LENGTHS) - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12", 1-14", 1-16" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



MULTI-DECK



MULTI-DECK

NOTES

- Cases shown with an ANSI/NSF* mark are listed by NSF.
- Cases shown with a UL* mark are listed by Underwriters Laboratories Inc.
- Allow for an extra 1/8" per joint when lining up merchandisers.
- Technical information contained herein is subject to change without notice.

* ANSI - American National Standard Institute
NSF - National Sanitation Foundation
UL - Underwriters Laboratories Inc

Multi-Deck Dairy/Deli Merchandiser with Synerg-E™

6DMLH-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans	
		120 Volts	
		Amps	Watts
6DMLH-NRG	4'	2	0.45 33
	6'	3	0.68 50
	8'	4	0.90 67
	12'	6	1.35 100

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)			
				Standard Power (Cornice or Shelf)		High Power (Cornice)	
			120 Volts	120 Volts		120 Volts	
				Amps	Watts	Amps	Watts
6DMLH-NRG	4'	1	4'	0.23	28	0.10	11.9
	6'	2	3'	0.37	44	0.14	16.6
	8'	2	4'	0.47	56	0.20	23.8
	12'	3	4'	0.70	84	0.30	35.7
						0.66	78.6

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ² (°F)	Discharge ³ Air (°F)	Discharge ⁴ Air Velocity (FPM)
6DMLH-NRG	1450	6 - 8	28	34	200

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
6DMLH-NRG	6	6-8	---	---	45	47	---	---	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.21.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

2 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

3 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

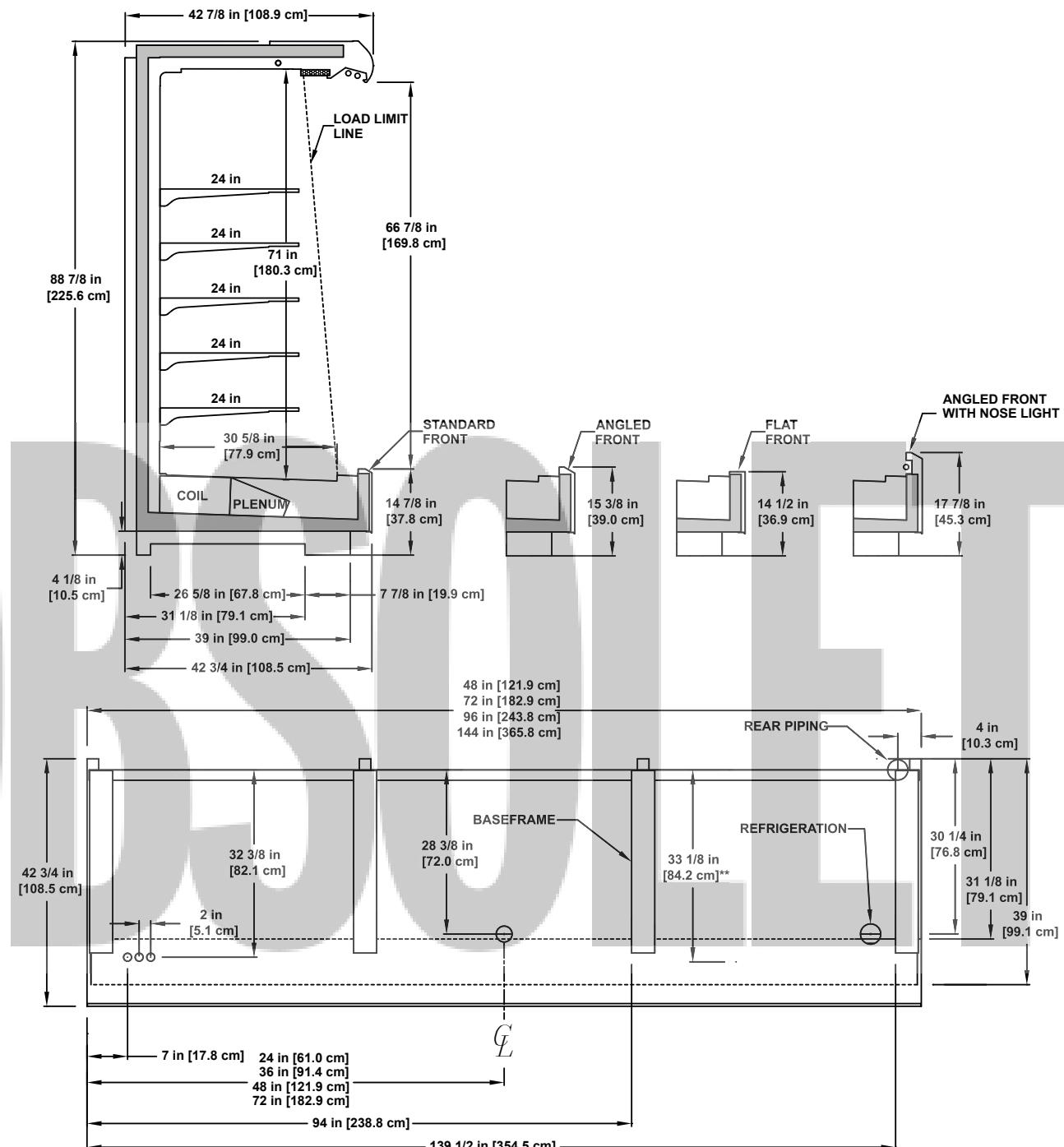
4 Average discharge air velocity at peak of defrost.

5 NOTE: “---” not an option on this case model.

All measurements are taken per ARI 1200 - 2002 specifications.



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MULTI-DECK
Dairy/Deli



Multi-Deck Rear Load Dairy/Deli Merchandiser with Synerg-E™

6DMLHR-NRG - 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans	
		120 Volts	
		Amps	Watts
6DMLHR-NRG	8'	4	0.90
	12'	6	1.35
			100

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)				
				Standard Power (Cornice)		High Power (Cornice)		
			120 Volts	120 Volts		120 Volts		
			Amps	Watts	Amps	Watts	Amps	
6DMLHR-NRG	8'	2	4'	0.47	56	0.20	23.8	0.44
	12'	3	4'	0.70	84	0.30	35.7	0.66
								78.6

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ² (°F)	Discharge ³ Air (°F)	Discharge ⁴ Air Velocity (FPM)
6DMLHR-NRG	1500	6 - 8	25	34	200

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
6DMLHR-NRG	6	6-8	---	---	45	47	---	---	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.21.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

2 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

3 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

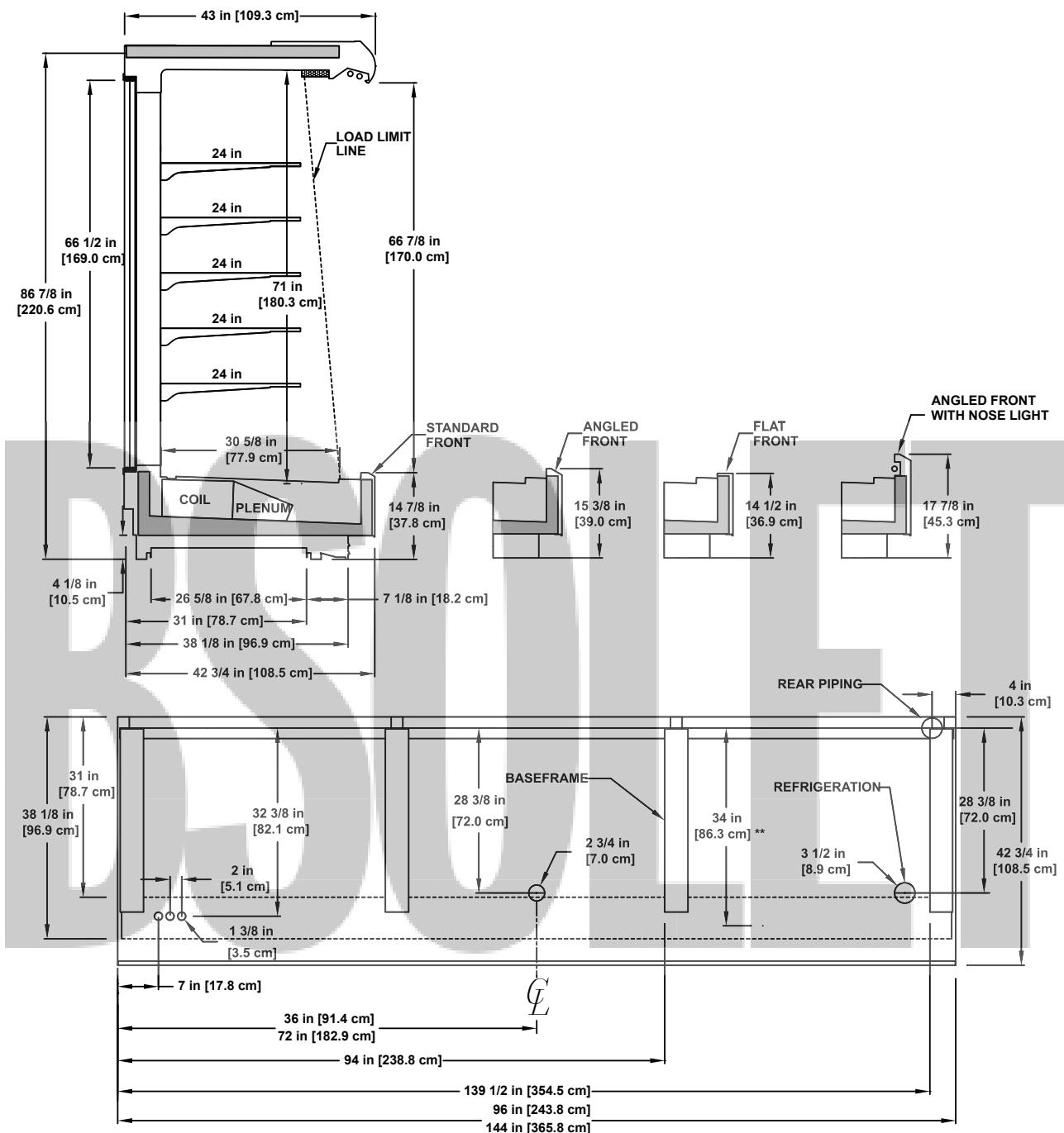
4 Average discharge air velocity at peak of defrost.

5 NOTE: “---” not an option on this case model.

All measurements are taken per ARI 1200 - 2002 specifications.



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**NOTES:**

*: STUB-UP AREA

**: RECOMMENDED STUP-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
 WIRING-TO-THE-TOP ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
 A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
 BACK PANELS ADD APPROXIMATELY 1" TO THE REAR OF THE CASE
 SUCTION LINE 7/8", LIQUID LINE WITH HOT GAS DEFROST 1/2"
 AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18", 20", 22", 24" & 27"
 DASHED LINES SIGNIFY AREA INSIDE THE BASE RAIL BEHIND KICK PLATE



Narrow Multi-Deck Self-Contained Deli Merchandiser

ONN35UA - 4'

System Requirements

Model	Volts	Phase	Hz	Wire	Minimum Circuit Ampacity	Maximum Overcurrent Protection
ONN35UA	4'	120	1	60	2 wire + ground	23.63

Electrical Data

Model	Fans per Case	Standard Fans		Condenser Fans		Drain Pump		Evaporator Pan Heater		Maximum Lights		
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ONN35UA	4'	3	1.02	51	0.85	88	0.9	54	8.34	1000	0.57	68

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
			ONN35UA	4'	1	4'	0.23	28	0.10

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
ONN35UA		19.9	6-8	35	45	275

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
ONN35UA	120	1	60	1/2	11	51	R134A	2

Defrost Controls

Model	Defrosts Per Day	Electric Defrost ^x		Timed Off Defrost ^x		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONN35UA	3	40	47	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

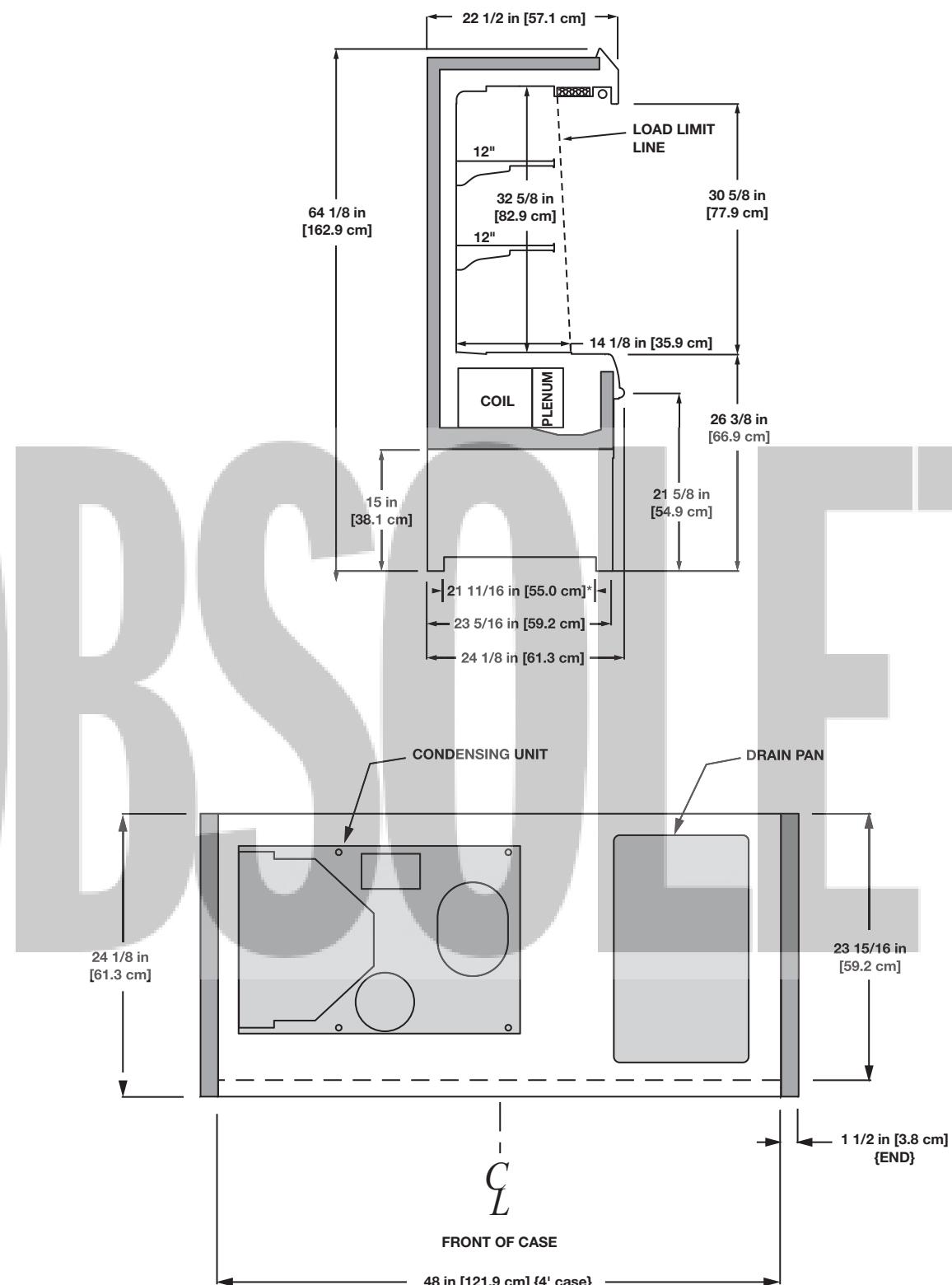
4 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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Multi-Deck Produce/Dairy/Deli Merchandiser

O4DM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O4DM	4'	2	1.00	60	0.47	28	---	1.92	400	2.22	532
	6'	2	1.00	60	0.47	28	---	2.88	600	3.33	798
	8'	3	1.50	90	0.70	42	---	3.85	800	4.44	1065
	12'	4	2.00	120	0.93	56	---	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
			120 Volts	120 Volts		120 Volts			
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts	Amps	Watts	
O4DM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front Sill Heights	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
O4DM Deli	2.5" Ext.	1170 ⁴	6-8	22	30		215
	5" Ext.	1138 ⁴	6-8	22	30		215
	7.5" Ext.	1114 ⁴	6-8	22	30		215
O4DM Dairy Cut Produce	Std. Dairy	1090 ⁴	6-8	26	31		215
	2.5" Ext.	1059 ⁴	6-8	26	31		215
	5" Ext.	1034 ⁴	6-8	26	31		215
	7.5" Ext.	1010 ⁴	6-8	26	31		215
O4DM Beverage Bulk Produce	Std. Dairy	1106 ⁴	6-8	29	36		215
	2.5" Ext.	1074 ⁴	6-8	29	35		215
	5" Ext.	1050 ⁴	6-8	29	35		215
	7.5" Ext.	1026 ⁴	6-8	29	35		215

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O4DM	4	6 - 8	32	47	42	47	26	45	42	45

1 “---” indicates not an option on this case model.

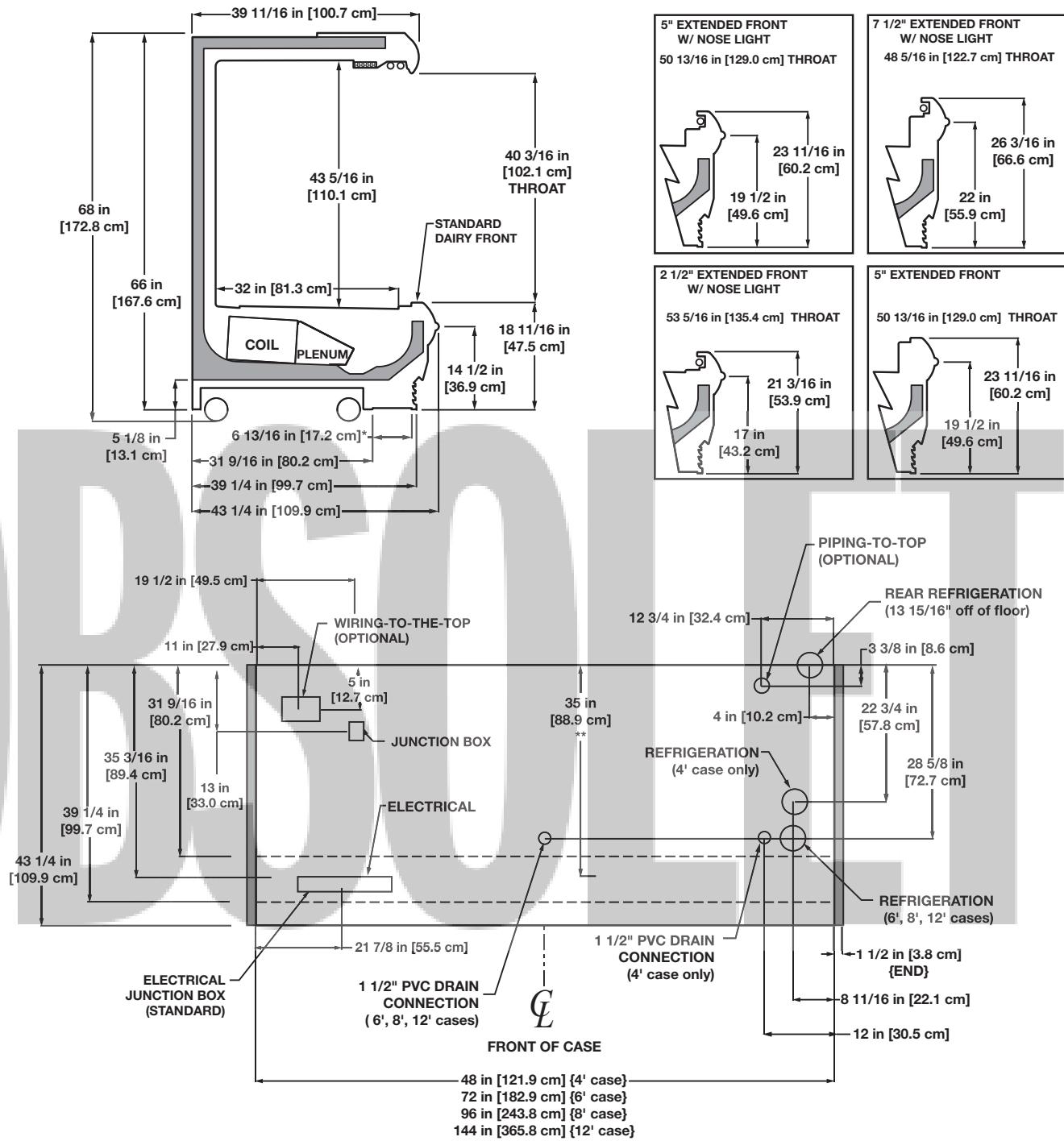
2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.10.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.





MULTI-DECK

Produce/Dairy/Deli



Narrow Multi-Deck Produce/Dairy/Deli Merchandiser

ON5DM - 4', 6', 8' & 12'

Electrical Data

Model		Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
			120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
			Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ON5DM	4'	2	1.00	60	0.47	28	---	---	1.92	400	2.22	532
	6'	3	1.50	90	0.70	42	---	---	2.88	600	3.33	798
	8'	4	2.00	120	0.93	56	---	---	3.85	800	4.44	1065
	12'	5	2.50	150	1.17	70	---	---	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
ON5DM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front Sill Heights	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
ON5DM Dairy Cut Produce	Std. Dairy	1691	6-8	22	32	47	215
	2.5" Ext.	1646	6-8	22	31	44	215
	5" Ext.	1619	6-8	22	31	40	215
	7.5" Ext.	1561	6-8	22	31	40	215
ON5DM Beverage Bulk Produce	Std. Dairy	1550	6-8	29	37	53	215
	2.5" Ext.	1508	6-8	29	36	52	215
	5" Ext.	1456	6-8	29	36	52	215
	7.5" Ext.	1430	6-8	29	36	52	215

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON5DM	4	6 - 8	32	47	42	47	26	45	42	45

1 " --- " indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.10.

- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.

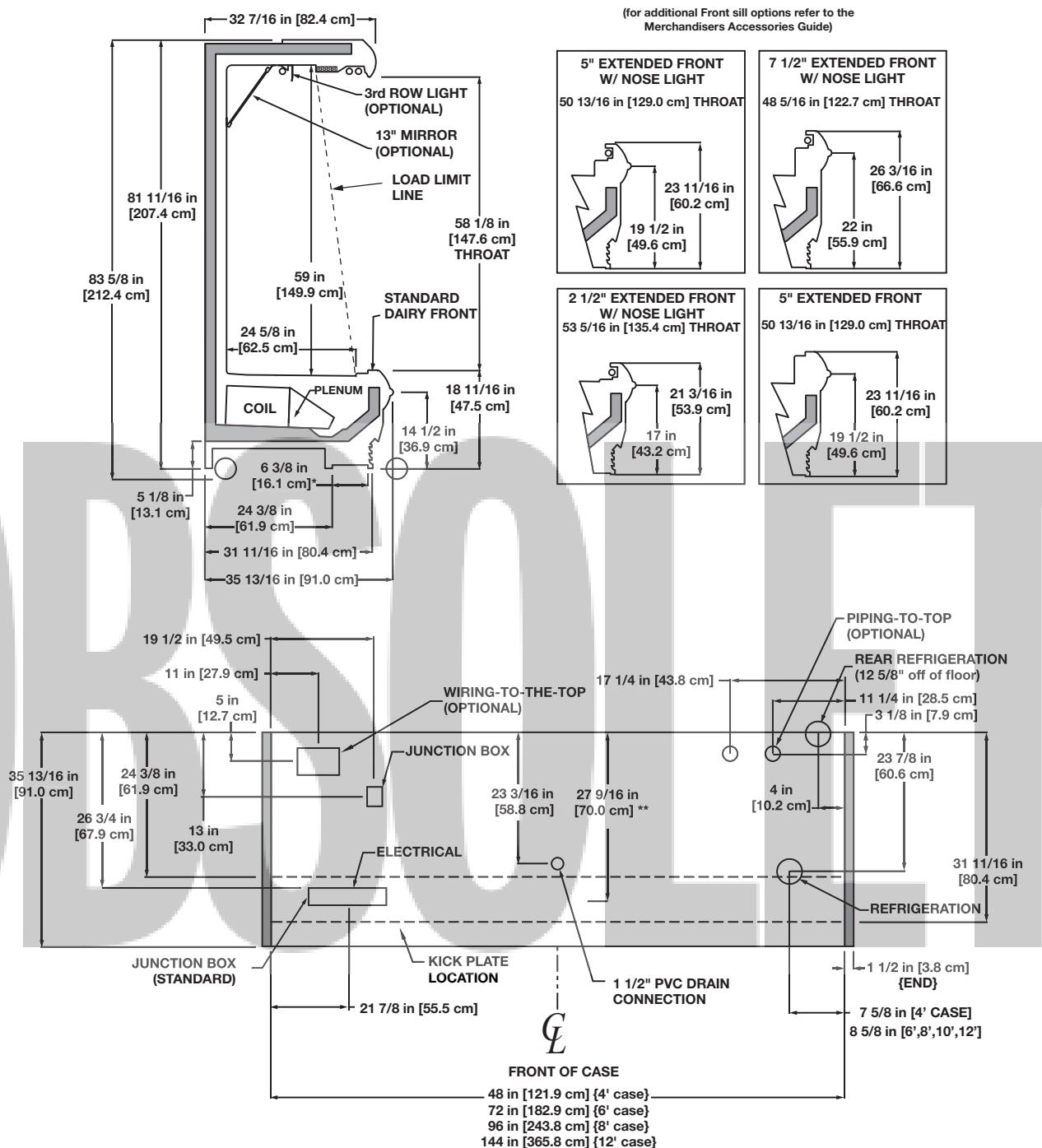
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.



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MULTI-DECK

Produce/Dairy

NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT SILL HEIGHT AND OVERALL CASE HEIGHT VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18" TOP SHELF MUST BE 16" OR SHORTER.
- RECOMMENDED CONFIGURATION IS 16" SHELF AND 3 OR 4 18" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Narrow Multi-Deck Self-Contained Produce/Dairy Merchandiser

ON5DMA - 6' & 8'

System Requirements

Model		Volts	Phase	Hz	Wire	Minimum Circuit Ampacity	Maximum Overcurrent Protection
ON5DMA	6'	208	1	60	2 wire + ground	25.41	45
	8'	208	1	60	2 wire + ground	25.53	45

Electrical Data

Model	Fans per Case	Standard Fans		Condenser Fans		Drain Pump		Evaporator Pan Heater		Maximum Lights		
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ON5DMA	6'	3	1.50	90	1.10	114	1.10	66	7.21	1500	4.70	564
	8'	4	2.00	120	1.10	114	1.10	66	7.21	1500	4.70	564

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge Air Velocity ¹ (FPM)
ON5DMA		52	6-8	31	44	215
		52	6-8	31	44	215

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
ON5DMA	208	1	60	1-3/4	10.9	10.9	R404A	
	208	1	60	2-1/4	12.4	61	R404A	

Defrost Controls

Model	Defrosts Per Day	Run-Off Time (min)	Electric Defrost ^x		Timed Off Defrost ^x		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON5DMA	4	6 - 8	-- ⁴	---	42	47	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

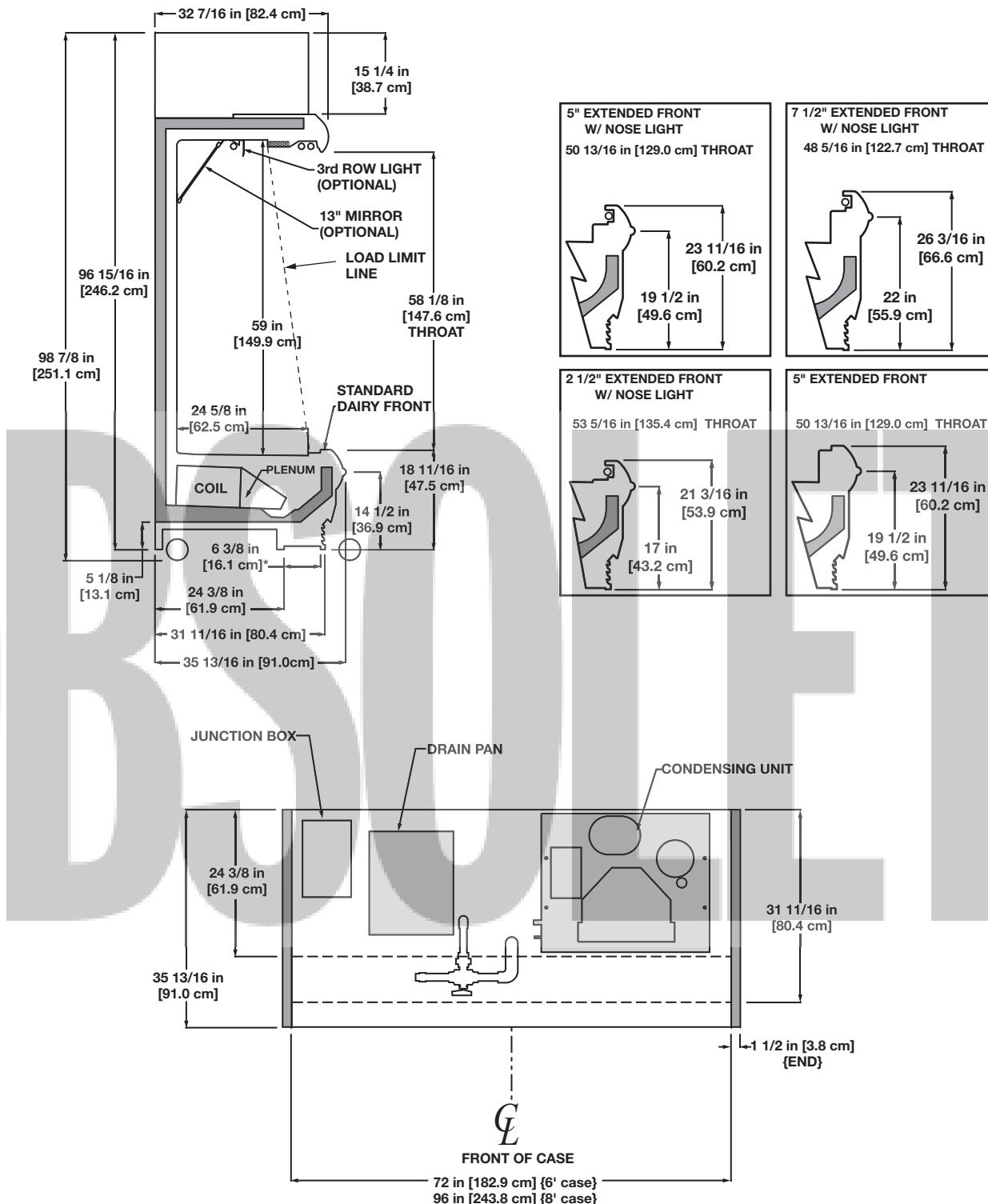
4 NOTE: " - " not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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MULTI-DECK

Produce/Dairy

NOTES:

- FRONT SILL HEIGHT AND OVERALL CASE HEIGHT VARY WITH BASEFRAME HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18" TOP SHELF MUST BE 16" OR SHORTER.
- RECOMMENDED CONFIGURATION IS 16" SHELF AND 3 OR 4 18" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



High Narrow Multi-Deck Produce/Dairy/Deli Merchandiser with Synerg-E™

ON5DMH-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans		Anti-Condensate Heaters	
		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts
ON5DMH-NRG	4'	1	0.23	18	---
	6'	2	0.47	35	---
	8'	2	0.47	35	---
	12'	3	0.70	53	---

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
ON5DMH-NRG	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front Sill Heights	²BTUH/ft	Superheat Set Point @ Bulb (°F)		Evaporator³ (°F)	Discharge⁴ Air (°F)	Discharge⁵ Air Velocity (FPM)
			Set Point	Bulb (°F)			
ON5DMH-NRG (Dairy/Deli/ Cut Produce)	Std. Dairy	1445	6 - 8		28	33	210
	2.5" Ext.	1410	6 - 8		28	33	210
	5" Ext.	1385	6 - 8		28	33	210
	7.5" Ext.	1365	6 - 8		28	33	210
ON5DMH-NRG (Beverage/ Bulk Produce)	Std. Dairy	1235	6 - 8		34	37	210
	2.5" Ext.	1200	6 - 8		34	37	210
	5" Ext.	1175	6 - 8		34	37	210
	7.5" Ext.	1155	6 - 8		34	37	210

Defrost Controls

Model	Defrosts per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON5DMH-NRG (Dairy/Deli/Cut Produce)	6	---	---	40	42	---	---	---	---
ON5DMH-NRG (Beverage/Bulk Produce)	2	---	---	30	42	---	---	---	---

1 NOTE: “---” not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.20.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

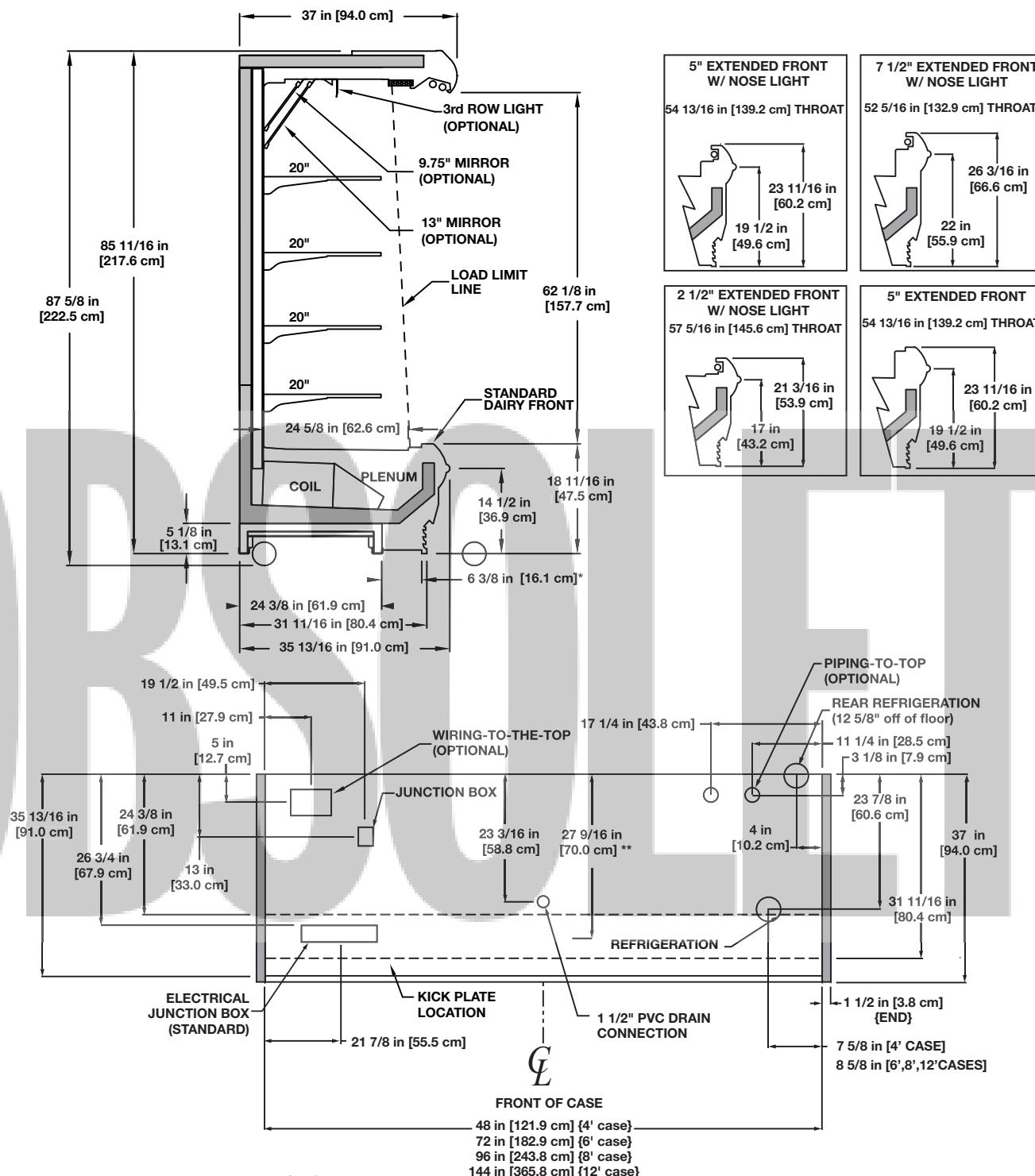
3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.





MULTI-DECK

Produce/Dairy/Deli



Multi-Deck Produce/Dairy/Deli Merchandiser with Synerg-E™

O5DM-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans		Anti-Condensate Heaters	
		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts
O5DM-NRG	4'	1	0.23	18	---
	6'	2	0.47	35	---
	8'	2	0.47	35	---
	12'	3	0.70	53	---

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)			
				Standard Power (Cornice or Shelf)		High Power (Cornice)	
				120 Volts		120 Volts	
O5DM-NRG	4'	1	4'	0.23	28	0.10	11.9
	6'	2	3'	0.37	44	0.14	16.6
	8'	2	4'	0.47	56	0.20	23.8
	12'	3	4'	0.70	84	0.30	35.7

Guidelines & Control Settings

Model	Front Sill Heights	²BTUH/ft	Superheat Set Point @ Bulb (°F)		Evaporator ^³ (°F)	Discharge Air ^⁴ (°F)	Discharge ^⁵ Air Velocity (FPM)
			Amps	Watts			
O5DM-NRG (Dairy/Deli/ Cut Produce)	Std. Dairy	1140	6 - 8		28	31	140
	2.5" Ext.	1105	6 - 8		28	31	140
	5" Ext.	1080	6 - 8		28	31	140
	7.5" Ext.	1060	6 - 8		28	31	140
O5DM-NRG (Beverage/ Bulk Produce)	Std. Dairy	930	6-8		34	37	140
	2.5" Ext.	895	6-8		34	37	140
	5" Ext.	870	6-8		34	37	140
	7.5" Ext.	850	6-8		34	37	140

Defrost Controls

Model	Defrosts per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O5DM-NRG (Dairy/Deli/Cut Produce)	6	---	---	40	42	---	---	---	---
O5DM-NRG (Beverage/Bulk Produce)	2	---	---	30	42	---	---	---	---

1 NOTE: "---" not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.20.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

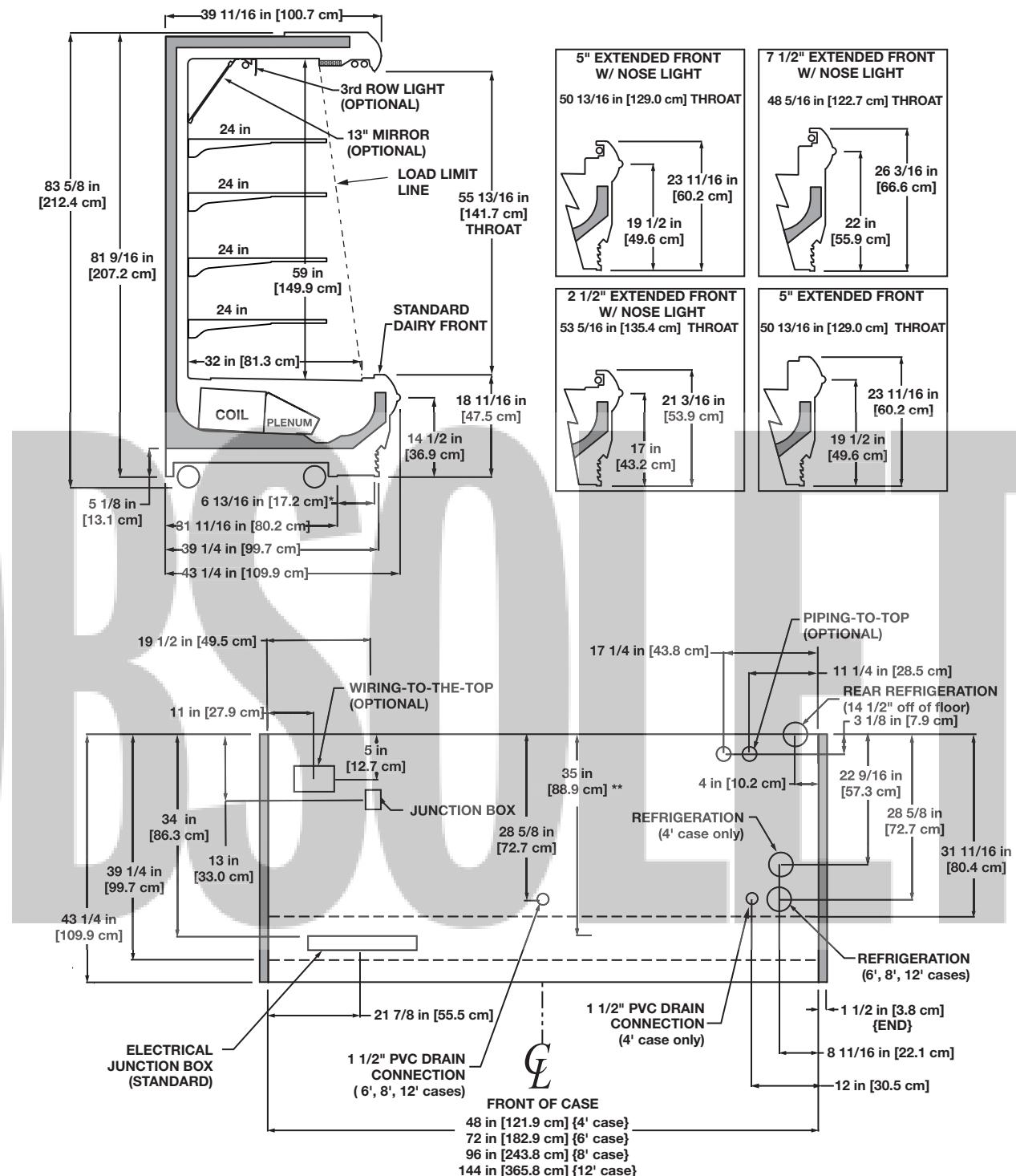
3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.



**NOTES:**

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT SILL HEIGHT AND OVERALL CASE HEIGHT VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP ADDS APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (4' & 6') - 5/8", SUCTION LINE (8' & 12') - 7/8", LIQUID LINE (ALL LENGTHS) - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18", 20", 22" & 24"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Multi-Deck Self-Contained Produce/Dairy/Deli Merchandiser

O5DMA - 4', 6' & 8'

System Requirements

Model	Volts	Phase	Hz	Wire	Minimum Circuit Ampacity	Maximum Overcurrent Protection
O5DMA	4'	208	1	60	2 wire + ground	22.10
	6'	208	1	60	2 wire + ground	23.03
	8'	208	1	60	2 wire + ground	23.93

Electrical Data

Model	Fans per Case	Standard Fans		Drain Pump		Evaporator Pan Heater		Maximum Lights		
		120 Volts		120 Volts		120 Volts		120 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O5DMA	4'	2	1.00	60	1.10	66	7.21	1500	3.18	382
	6'	2	1.00	60	1.10	66	7.21	1500	4.59	551
	8'	3	1.50	90	1.10	66	7.21	1500	4.59	551

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
O5DMA		52	6-8	30	44	250
		52	6-8	30	44	250
		52	6-8	30	44	250

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
O5DMA	208	1	60	1	9.6	46	R404A	4.5
	208	1	60	1-3/4	10.9	56	R404A	
	208	1	60	2-1/4	12.4	61	R404A	9.7

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O5DMA	4	---	---	42	47	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

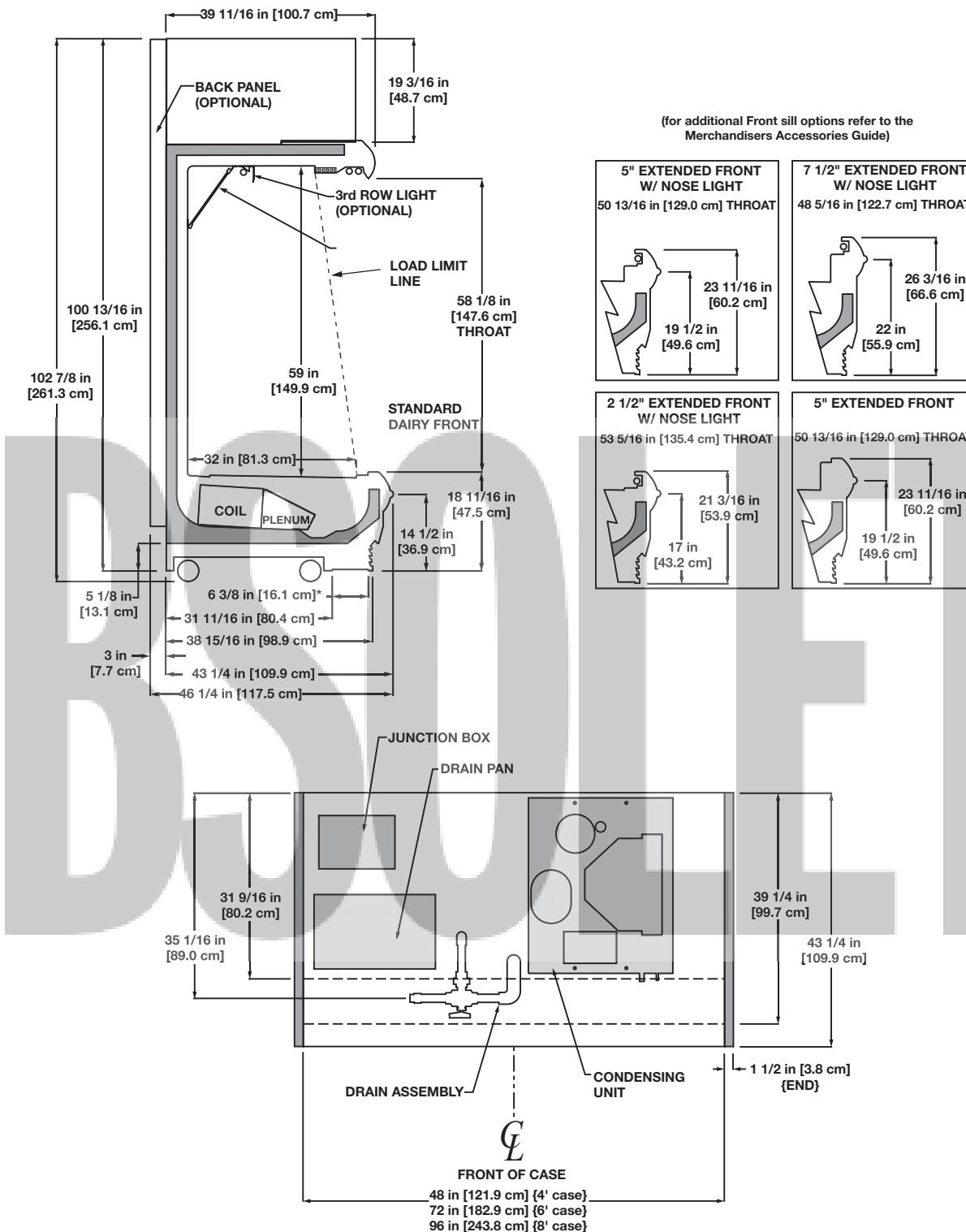
4 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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MULTI-DECK

Produce/Dairy/Deli



High Multi-Deck Produce/Dairy/Deli Merchandiser with Synerg-E™

O5DMH-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans		Anti-Condensate Heaters	
		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts
O5DMH-NRG	4'	1	0.24	18	---
	6'	2	0.48	36	---
	8'	2	0.48	36	---
	12'	3	0.72	54	---

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)			Clearvoyant LED Lighting (Per Light Row)			
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts		120 Volts		120 Volts		
			Amps	Watts	Amps	Watts	Amps	Watts	
O5DMH-NRG	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front Sill Heights	²BTUH/ft	Superheat Set Point @ Bulb (°F)		Evaporator ^³ (°F)	Discharge ^⁴ Air (°F)	Discharge ^⁵ Air Velocity (FPM)
			Std. Dairy	2.5" Ext.			
O5DMH-NRG (Dairy/Deli/ Cut Produce)	Std. Dairy	1375	6 - 8		28	33	150
	2.5" Ext.	1340	6 - 8		28	33	150
	5" Ext.	1315	6 - 8		28	33	150
	7.5" Ext.	1295	6 - 8		28	33	150
O5DMH-NRG (Beverage/ Bulk Produce)	Std. Dairy	1165	6 - 8		34	37	150
	2.5" Ext.	1130	6 - 8		34	37	150
	5" Ext.	1105	6 - 8		34	37	150
	7.5" Ext.	1085	6 - 8		34	37	150

Defrost Controls

Model	Defrosts per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O5DMH-NRG (Dairy/Deli/Cut Produce)	6	---	---	40	42	---	---	---	---
O5DMH-NRG (Beverage/Bulk Produce)	2	---	---	30	42	---	---	---	---

1 NOTE: " --- " not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.20.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

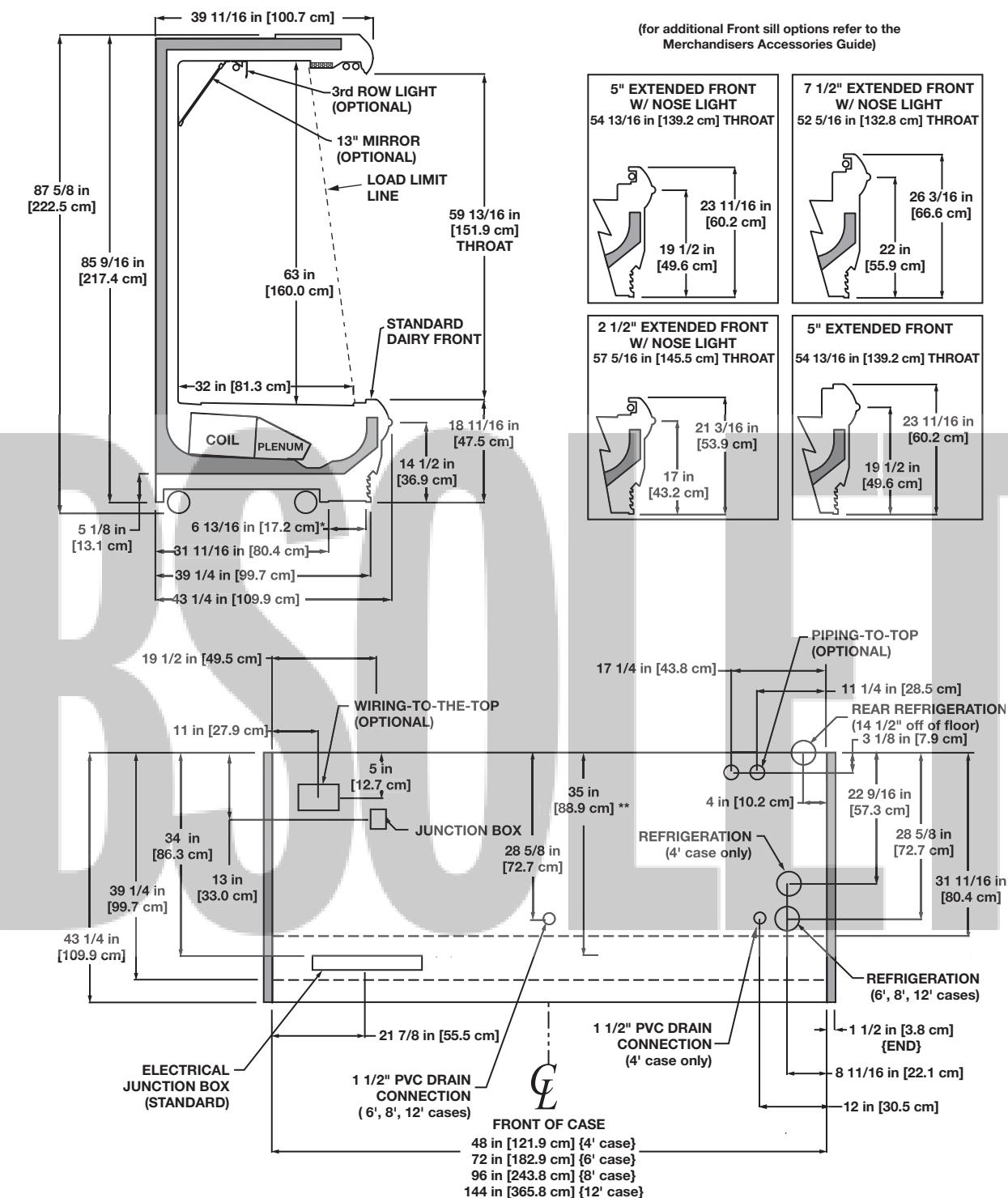
3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.





MULTI-DECK

Produce/Dairy/Deli



Multi-Deck Rear Load Dairy Merchandiser with Synerg-E™

O5DR-NRG - 8' & 12'

Electrical Data

Model		Fans per Case	High Efficiency Fans		Anti-Condensate Heaters	
			120 Volts		120 Volts	
			Amps	Watts	Amps	Watts
O5DR-NRG	8'	4	0.90	67	---	---
	12'		1.35	100	---	---

Lighting Data

Model		Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)		
				Fluorescent Lighting (Per Light Row)		Standard Power (Cornice or Shelf)
				120 Volts	120 Volts	High Power (Cornice)
O5DR-NRG	8'	2	4'	0.47	56	0.20
	12'	3	4'	0.70	84	0.30
					23.8	0.44
					52.4	0.66
					78.6	

Guidelines & Control Settings

Model	Front Sill Heights	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ³ (°F)	Discharge ⁴ Air (°F)	Discharge ⁵ Air Velocity (FPM)
O5DR-NRG (Dairy)	Std. Dairy	1225	6 - 8	28	32	250
	2.5" Ext.	1190	6 - 8	28	32	250
	5" Ext.	1165	6 - 8	28	32	250
	7.5" Ext.	1145	6 - 8	28	32	250
O5DR-NRG (Beverage)	2.5" Ext.	TBD	TBD	TBD	TBD	TBD
	5" Ext.	TBD	TBD	TBD	TBD	TBD

Defrost Controls

Model	Defrosts per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O5DR-NRG (Dairy)	6	---	---	40	42	---	---	---	---
O5DR-NRG (Beverage)	TBD	---	---	TBD	TBD	---	---	---	---

1 NOTE: "---" not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.20.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

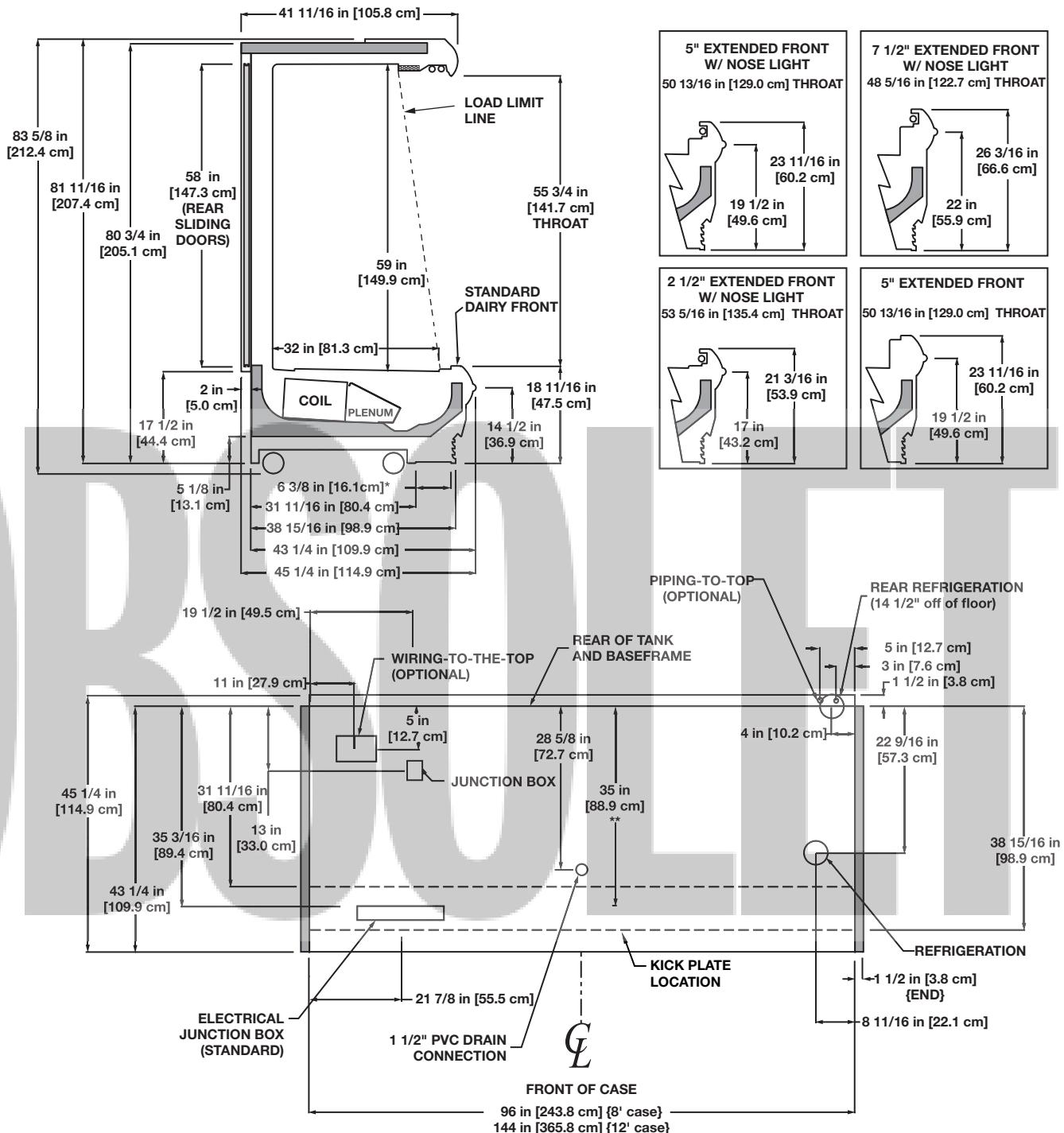
4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.



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**NOTES:**

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT SILL HEIGHT AND OVERALL CASE HEIGHT VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- COOLER OPENING SHOULD BE 82" X CASE LENGTH
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18", 20", 22" & 24"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



High Multi-Deck Rear Load Dairy Merchandiser

O5DRH - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O5DRH	8'	4	3.20	2113	1.44	142	- - - ¹	- - -	3.85	800	4.44	1065
	12'	6	4.80	320	2.16	213	- - -	- - -	5.78	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts		120 Volts		120 Volts		
O5DRH	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front Sill Heights	² BTUH/ft	Superheat Set Point @ Bulb (F°)	Evaporator (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ³ Air Velocity (FPM)
O5DRH Dairy	Std. Dairy	1423	6-8	22	32	47	275
	2.5" Ext.	1423	6-8	22	32	46	275
	5" Ext.	1373	6-8	22	32	42	275
	7.5" Ext.	1344	6-8	22	32	42	275
O5DRH Beverage	2.5" Ext.	1341	6-8	26	35	48	275
	5" Ext.	1307	6-8	26	35	47	275

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)
O5DRH	4	6-8	32	47	45	47	26	45	42	45

1 “- - -” indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.10.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

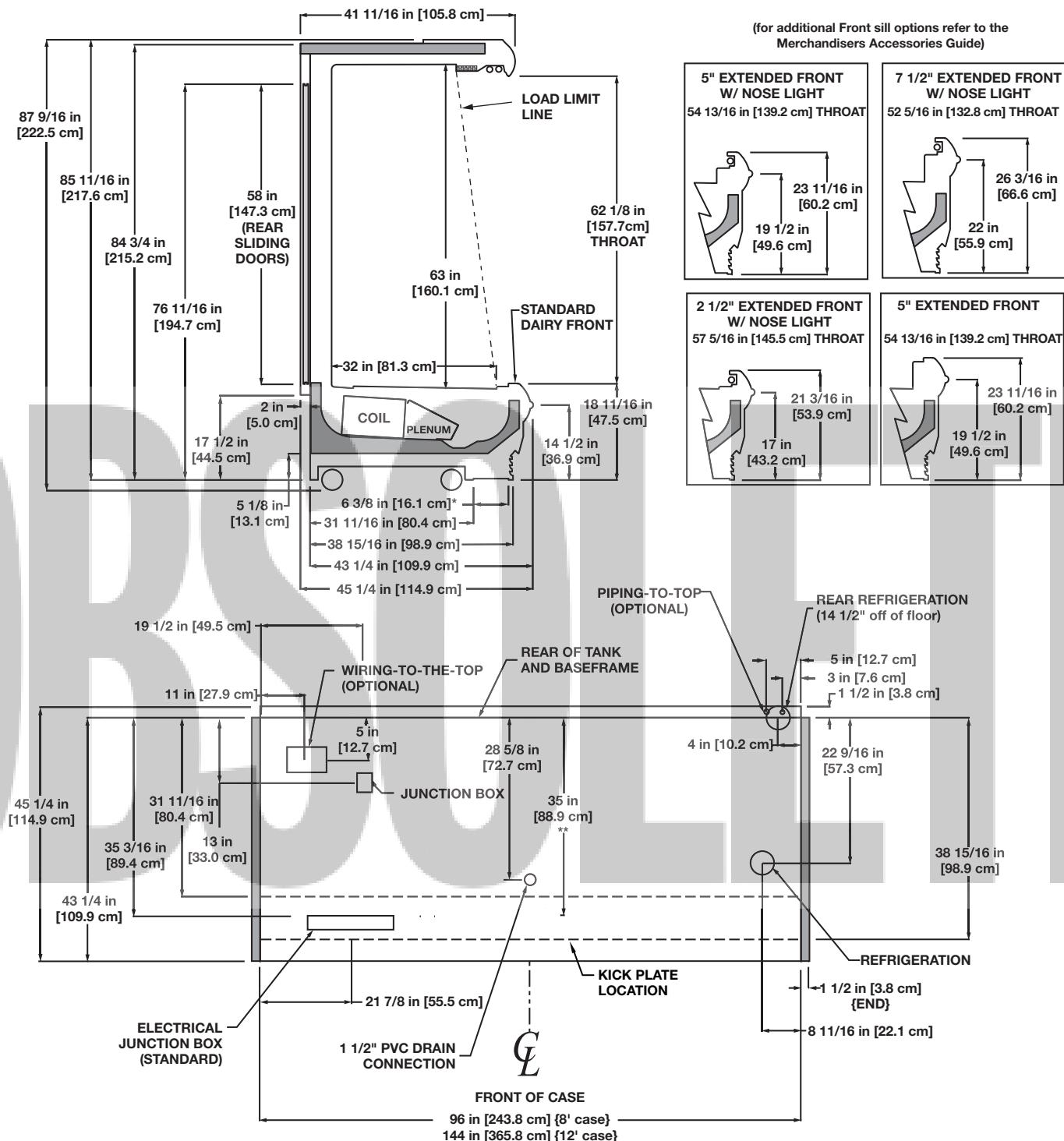
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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Multi-Deck Deli/Meat Merchandiser with Synerg-E™

O5M-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans		Anti-Condensate Heaters	
		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts
O5M-NRG	4'	1	0.50	37.0	---
	6'	2	0.50	37.0	---
	8'	2	0.75	55.5	---
	12'	3	1.00	74.0	---

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)			
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)	
			Amps	Watts	Amps	Watts	Amps	Watts
O5M-NRG	4'	1	0.23	28	0.10	11.9	0.22	26.2
	6'	2	0.37	44	0.14	16.6	0.30	35.8
	8'	2	0.47	56	0.20	23.8	0.44	52.4
	12'	3	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ³ (°F)	Discharge ⁴ Air (°F)	Discharge ⁵ Air Velocity (FPM)
O5M-NRG (Fresh Meat)	1300	6 - 8	26	30	240

Defrost Controls

Model	Defrosts per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O5M-NRG	6	---	---	40	42	---	---	---	---

1 NOTE: "---" not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.10.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

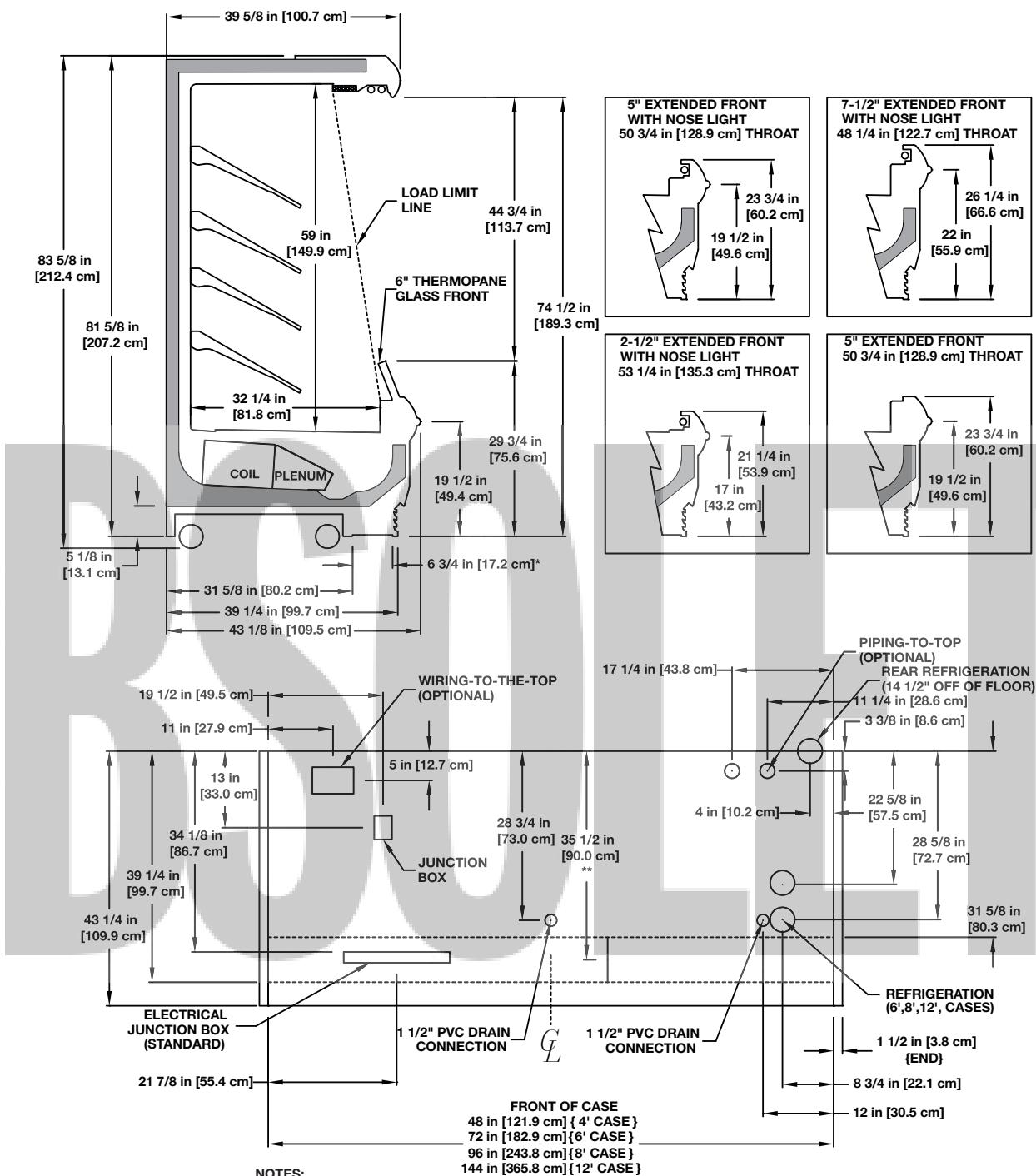
4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.



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High Multi-Deck Deli/Meat Merchandiser with Synerg-E™

O5MH-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans		Anti-Condensate Heaters	
		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts
O5MH-NRG	4'	1	0.50	37.0	---
	6'	2	0.50	37.0	---
	8'	2	0.75	55.5	---
	12'	3	1.00	74.0	---

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
O5MH-NRG	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ³ (°F)	Discharge ⁴ Air (°F)	Discharge ⁵ Air Velocity (FPM)
O5MH-NRG Fresh Meat	1440	6 - 8	26	30	270

Defrost Controls

Model	Defrosts per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O5MH-NRG	6	---	---	40	42	---	---	---	---

1 NOTE: “---” not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.20.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

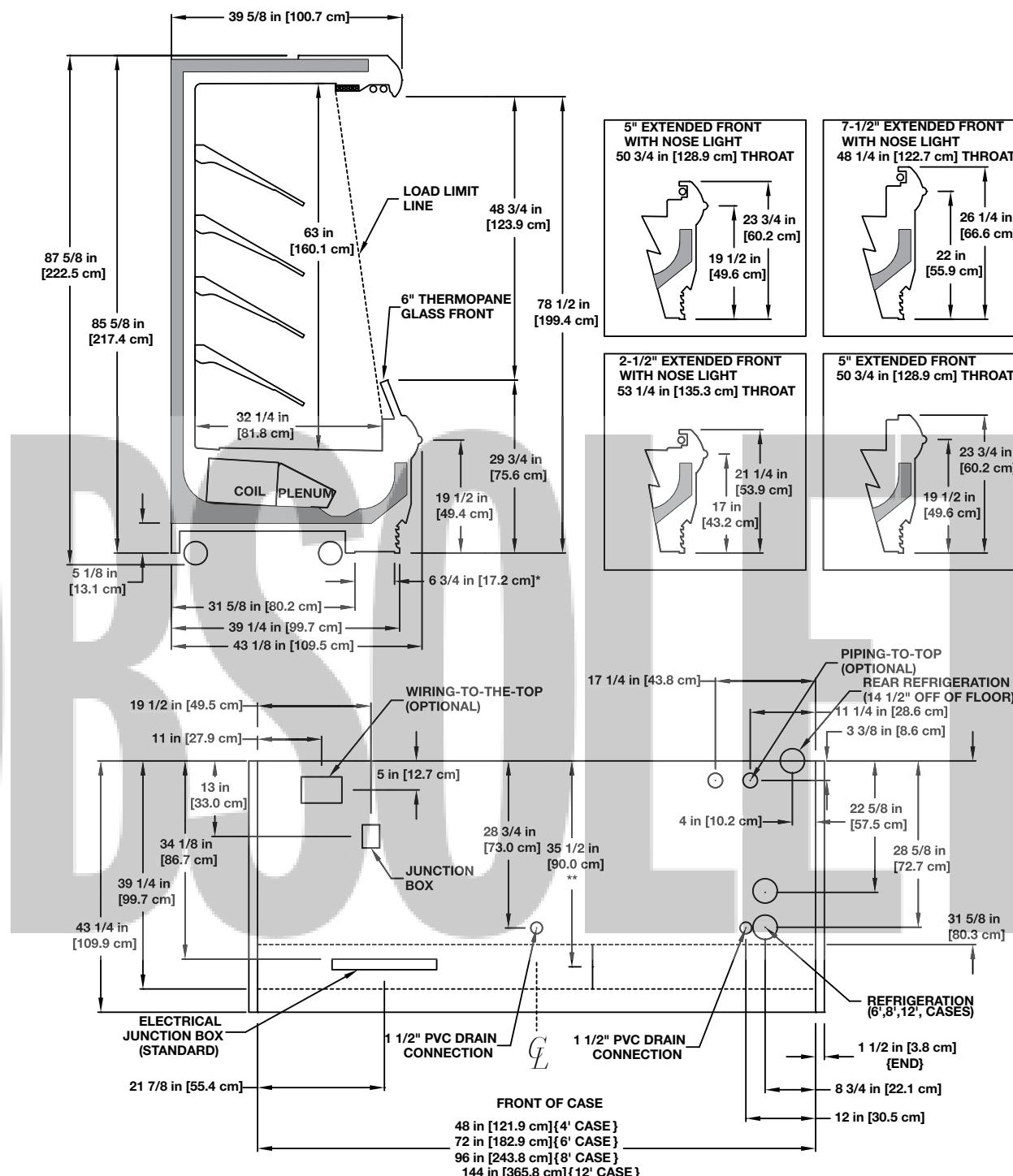
4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.



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Multi-Deck Rear Load Deli/Meat Merchandiser

O5MR - 8' & 12'

Electrical Data

Model	Fans per Case	High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O5MR	8'	4	1.44	142	---	---	3.85	800	4.44	1065
	12'	6	2.16	213	---	---	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
O5MR	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front Sill Height	Coil Type	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
O5MR Fresh Meat	Thermopane	Enh.	1587	6-8	17	31	40	275

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O5MR	6	6-8	40	47	45	45	26	45	45	45

1 “---” indicates not an option on this case model.

2 BTUH/ft notes:

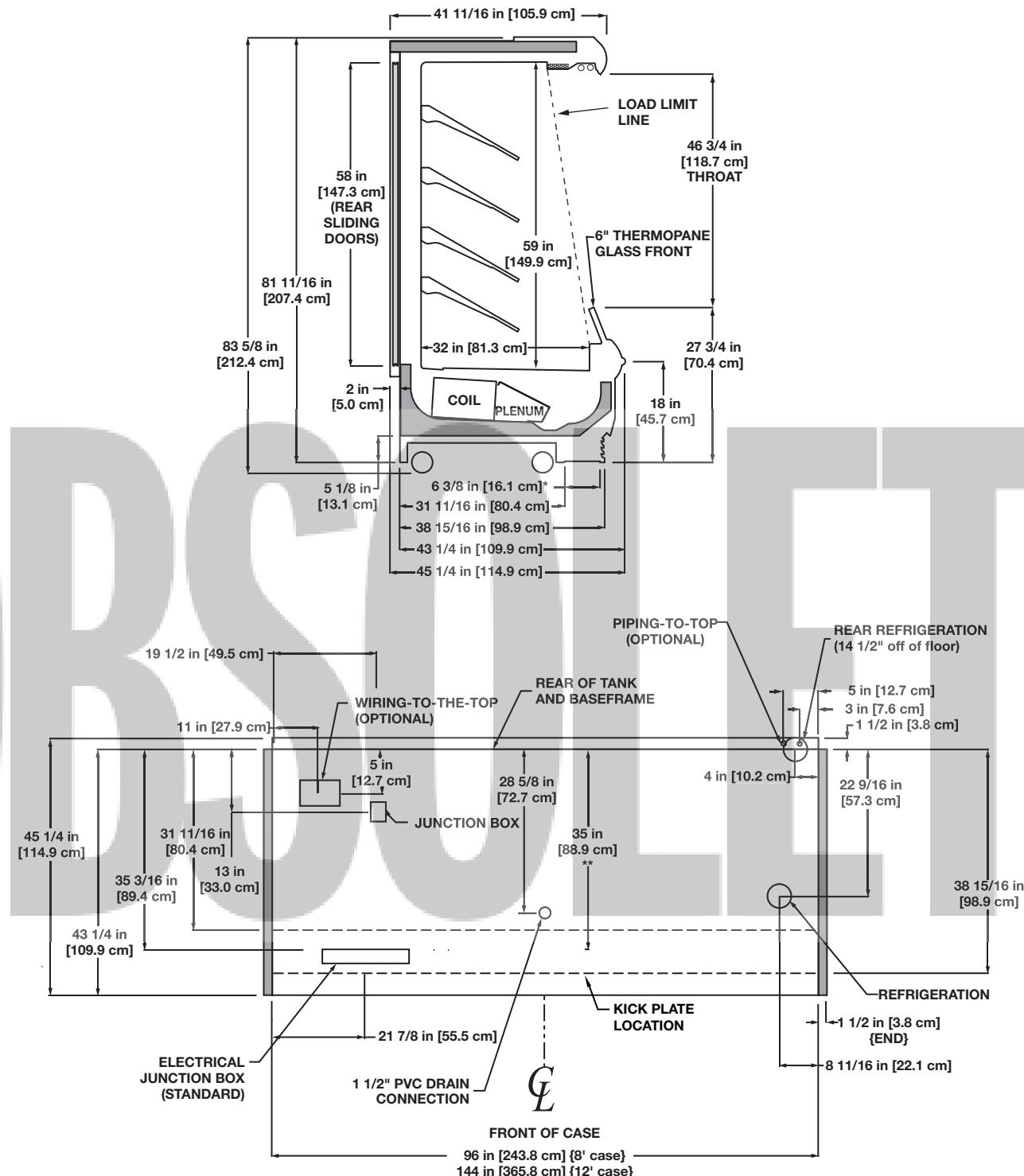
- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.20.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.



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**NOTES:**

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT SILL HEIGHT AND OVERALL CASE HEIGHT VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- AVAILABLE SHELF SIZES: 18" & 20" ARTICULATED ONLY (4 ROWS RECOMMENDED)
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Multi-Deck Frozen Food Merchandiser

O5Z - 6', 8' & 12'

Electrical Data

		Fans per Case ¹				Standard Fans		High-Efficiency Fans		Anti-Condensate ² Heaters		Defrost Heaters ³			
						120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
Model		Pri.	Sec.	Amb.	Total	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O5Z	6'	4	2	2	8	4.56	280	1.47	124	2.25	270	9.99	3600	11.53	4794
	8'	5	3	2	10	5.70	352	1.84	155	3.10	344	13.32	4800	15.37	6390
	12'	7	4	3	14	7.98	490	2.57	217	4.18	493	20.00	7200	23.06	9585

Lighting Data

Model		Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)				Clearvoyant LED Lighting (Per Light Row)			
				Fluorescent Lighting (Per Light Row)		Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts		120 Volts			
Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O5Z	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8		
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4		
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6		

Guidelines & Control Settings

Model	Front Sill Heights	⁴ BTUH/ft	Superheat Set Point @ Bulb (°F)		Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁵ Air Velocity (FPM)		
			Pri.	Sec.				Pri.	Sec.	Amb.
O5Z	22"	1787	3-5		-17	-5	0	650	425	275
	28"	1752	3-5		-17	-5	-5	650	425	275

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O5Z	3	13-15	34	50	---	---	24	60	---	---

1 Pri.=Primary, Sec.=Secondary, Amb.=Ambient

2 Cases equipped with windowed ends add 1.85 amps per end.

3 3-phase load. Figure given is maximum amps per phase.

4 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.

- Standard fans increase refrigeration load by 96 BTUH/fan.

5 Average discharge air velocity at peak of defrost.

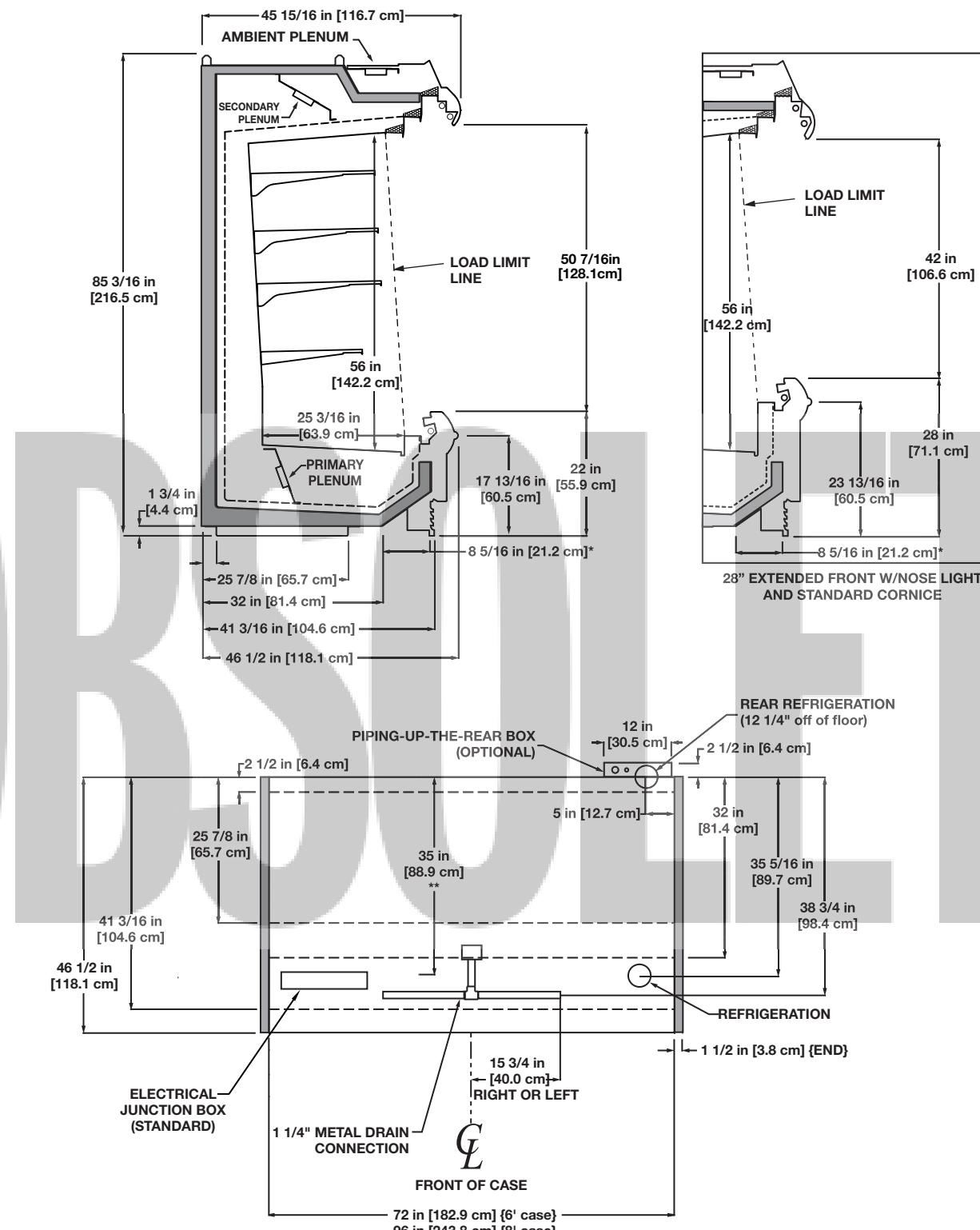
6 NOTE: "---" indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 18" & 22"
- RECOMMENDED CONFIGURATION IS 3 - 22" SHELVES ON TOP AND 1 - 18" SHELF ON THE BOTTOM
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

Narrow Multi-Deck Deli/Meat Merchandiser

ONHM - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONHM	4'	2	1.00	60	0.47	28	---	1.92	400	2.22	532
	6'	3	1.50	90	0.70	42	---	2.88	600	3.33	798
	8'	4	2.00	120	0.93	56	---	3.85	800	4.44	1065
	12'	5	2.50	150	1.17	70	---	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts		120 Volts		120 Volts		
Model	Lights per Row	Light Length	Amps	Watts	Amps	Watts	Amps	Watts	
ONHM	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front/Rear Sill Heights	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
ONHM	Standard	1320	6-8	22	30	41	340
	All Others	1220	6-8	22	30	41	340

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONHM	4	6-8	35	47	45	47	26	45	45	45

1 “---” indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.11.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

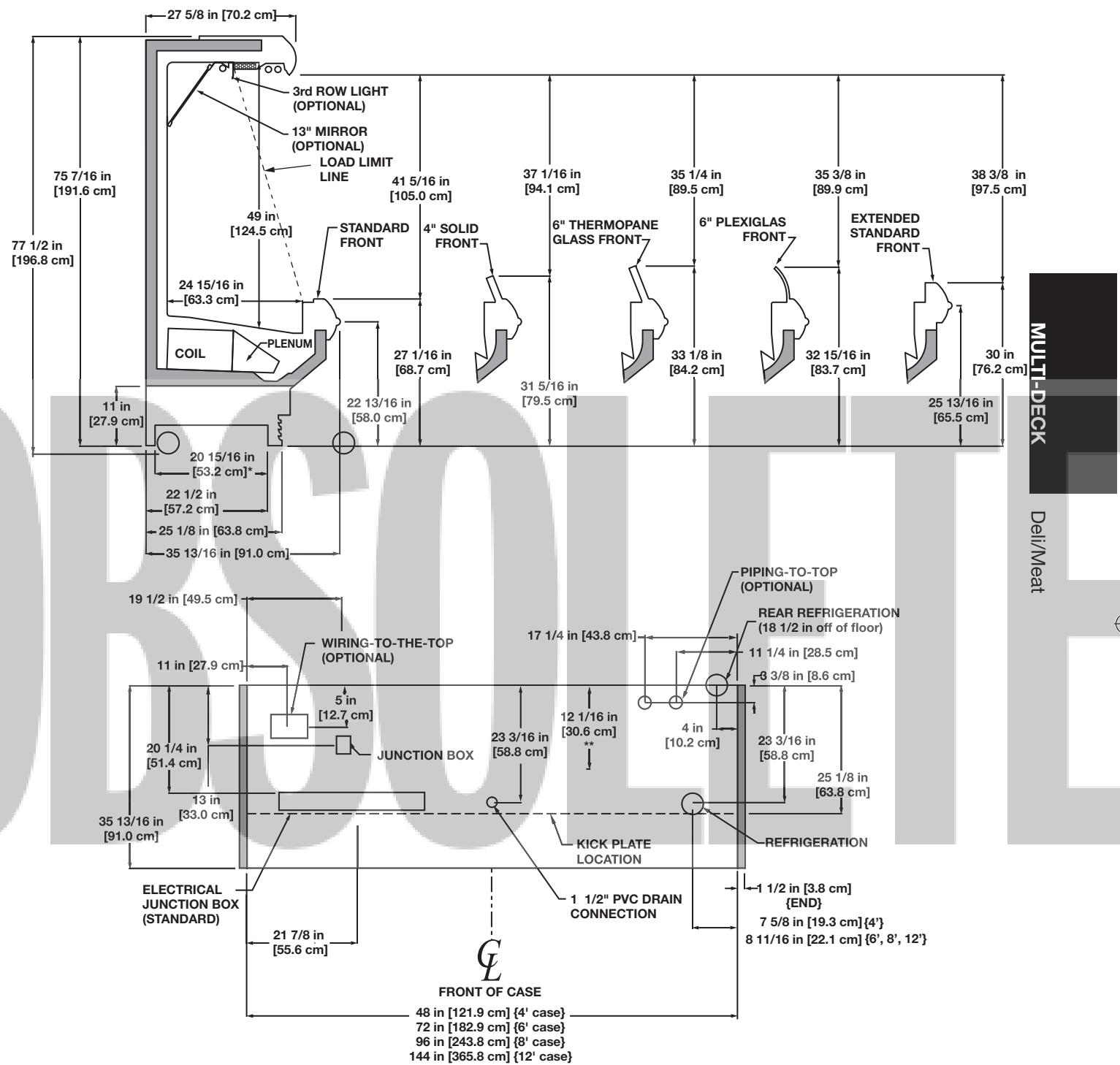
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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High Narrow Multi-Deck Deli/Meat Merchandiser

ONHMH - 4', 6', 8' & 12'

Electrical Data

Model		Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
			120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
			Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONHMH	4'	2	1.00	60	0.47	28	---	---	1.92	400	2.22	532
	6'	3	1.50	90	0.70	42	---	---	2.88	600	3.33	798
	8'	4	2.00	120	0.93	56	---	---	3.85	800	4.44	1065
	12'	5	2.50	150	1.17	70	---	---	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
ONHMH	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front/Rear Sill Heights	² BTUH/ft	Superheat Set Point @ Bulb (F°)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
ONHMH	Standard	1320	6-8	22	30	41	340
	All Others	1220	6-8	22	29	40	340

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONHMH	4	6-8	35	47	45	47	26	45	45	45

1 “---” indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.11.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

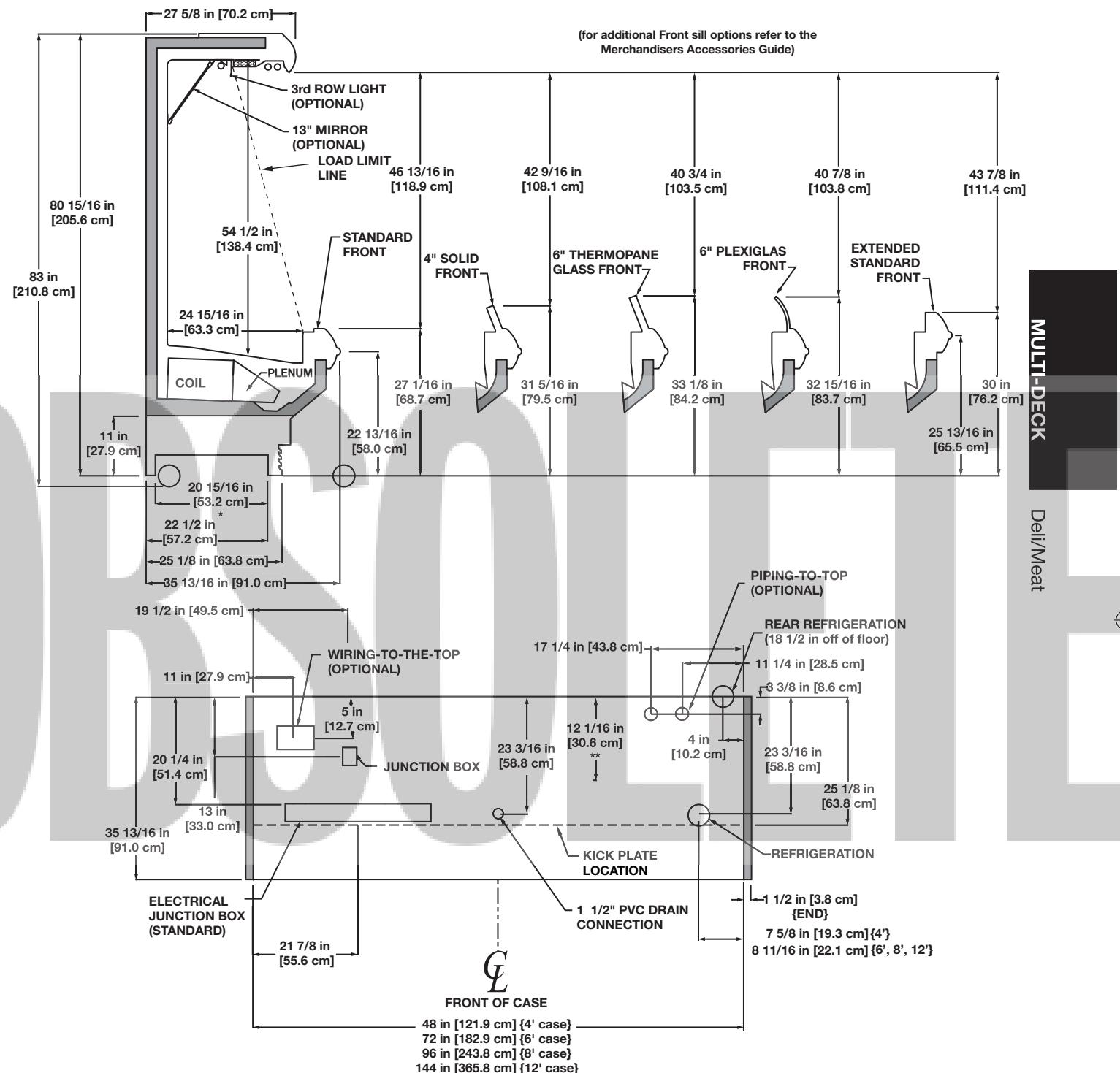
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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Multi-Deck Deli/Meat Merchandiser

OHM - 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters ³			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OHM	6'	2	1.00	60	0.39	23.4	---	2.88	600	3.33	798
	8'	3	1.50	90	0.59	35.1	---	3.85	800	4.44	1065
	12'	4	2.00	120	0.78	46.8	---	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
			120 Volts	120 Volts		120 Volts			
OHM	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	Front/Rear Sill Heights	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
OHM	Standard	1273	6-8	22	28	38	350
	All Others	1229	6-8	22	28	37	350

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OHM	4	6-8	35	47	45	47	26	45	45	45

1 “---” indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.11.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

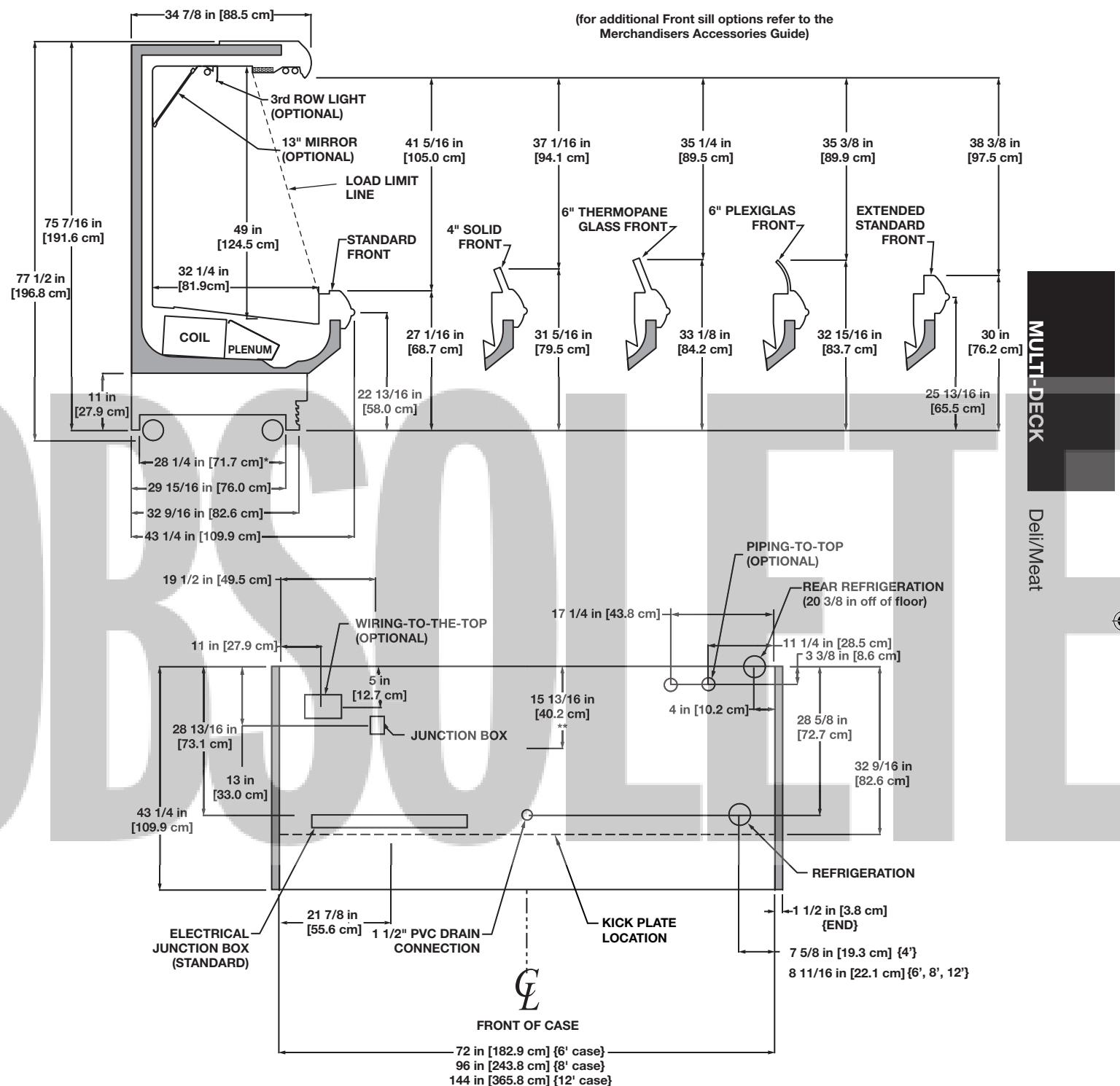
All measurements are taken per ARI 1200 - 2002 specifications.



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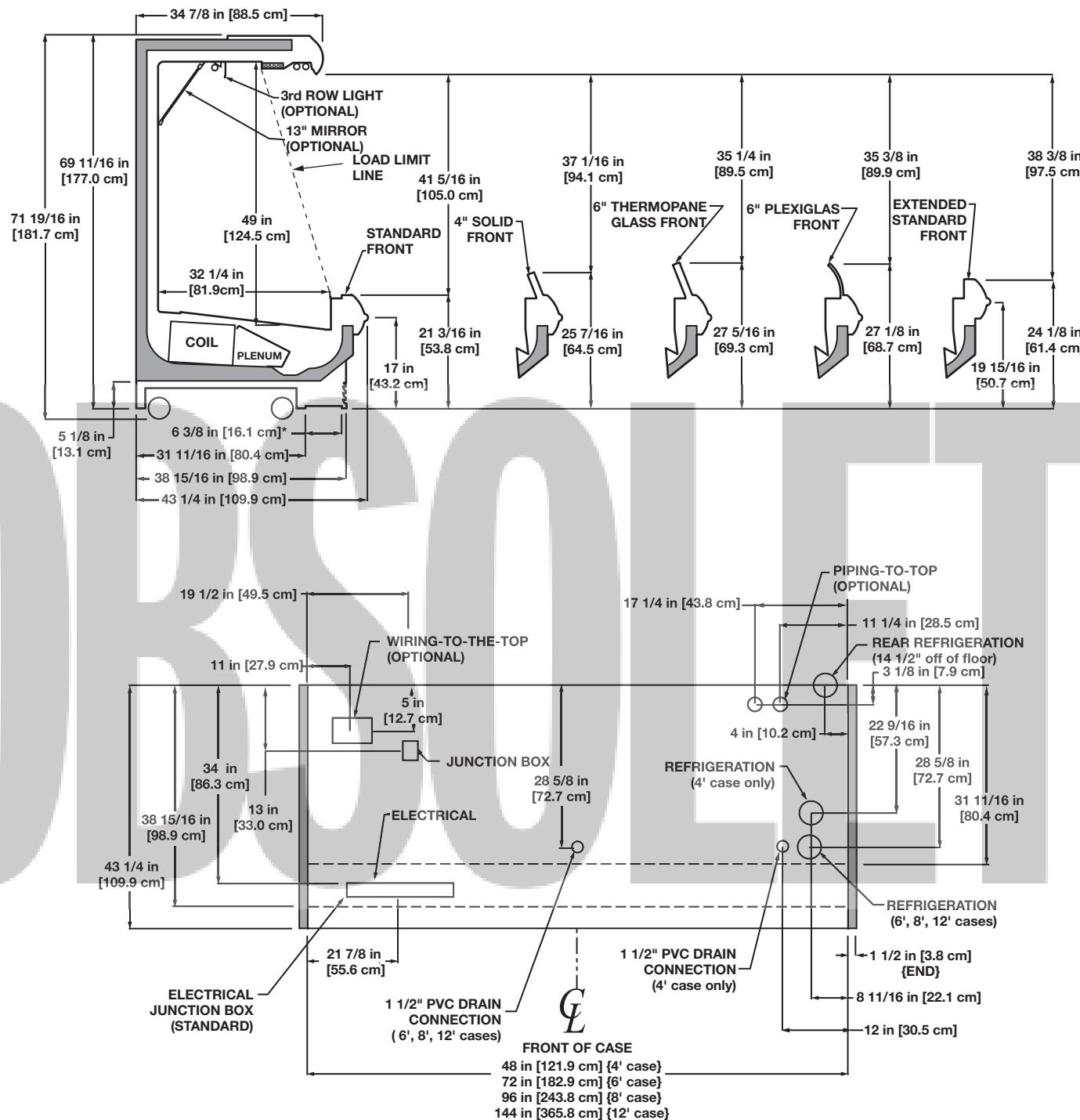
OHM
(11" BASEFRAME)

HILL PHOENIX®
EXCELLERATION
A DOVER COMPANY



OHM
(5" BASEFRAME)

HILL PHOENIX®
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NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT SILL HEIGHT AND OVERALL CASE HEIGHT VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18" & 20"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Multi-Deck Deli/Meat Merchandiser with Synerg-E™

OHMH-NRG - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	High Efficiency Fans		Anti-Condensate Heaters	
		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts
OHMH-NRG	4'	2	0.50	36	---
	6'	3	0.75	54	---
	8'	3	0.75	54	---
	12'	4	1.00	72	---

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)			
					Standard Power (Cornice or Shelf)		High Power (Cornice)	
			120 Volts		120 Volts		120 Volts	
OHMH-NRG	4'	1	4'	0.23	28	0.10	11.9	0.22 26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30 35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44 52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66 78.6

Guidelines & Control Settings

Model	Front Sill Heights	²BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator³ (°F)	Discharge⁴ Air (°F)	Discharge⁵ Air Velocity (FPM)
			(°F)		(°F)	
OHMH-NRG	Std.	1340	6 - 8	27	30	200
	All Others	1234	6 - 8	27	30	200

Defrost Controls

Model	Defrosts per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OHMH-NRG	6	---	---	40	42	---	---	---	---

1 NOTE: "---" not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.20.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

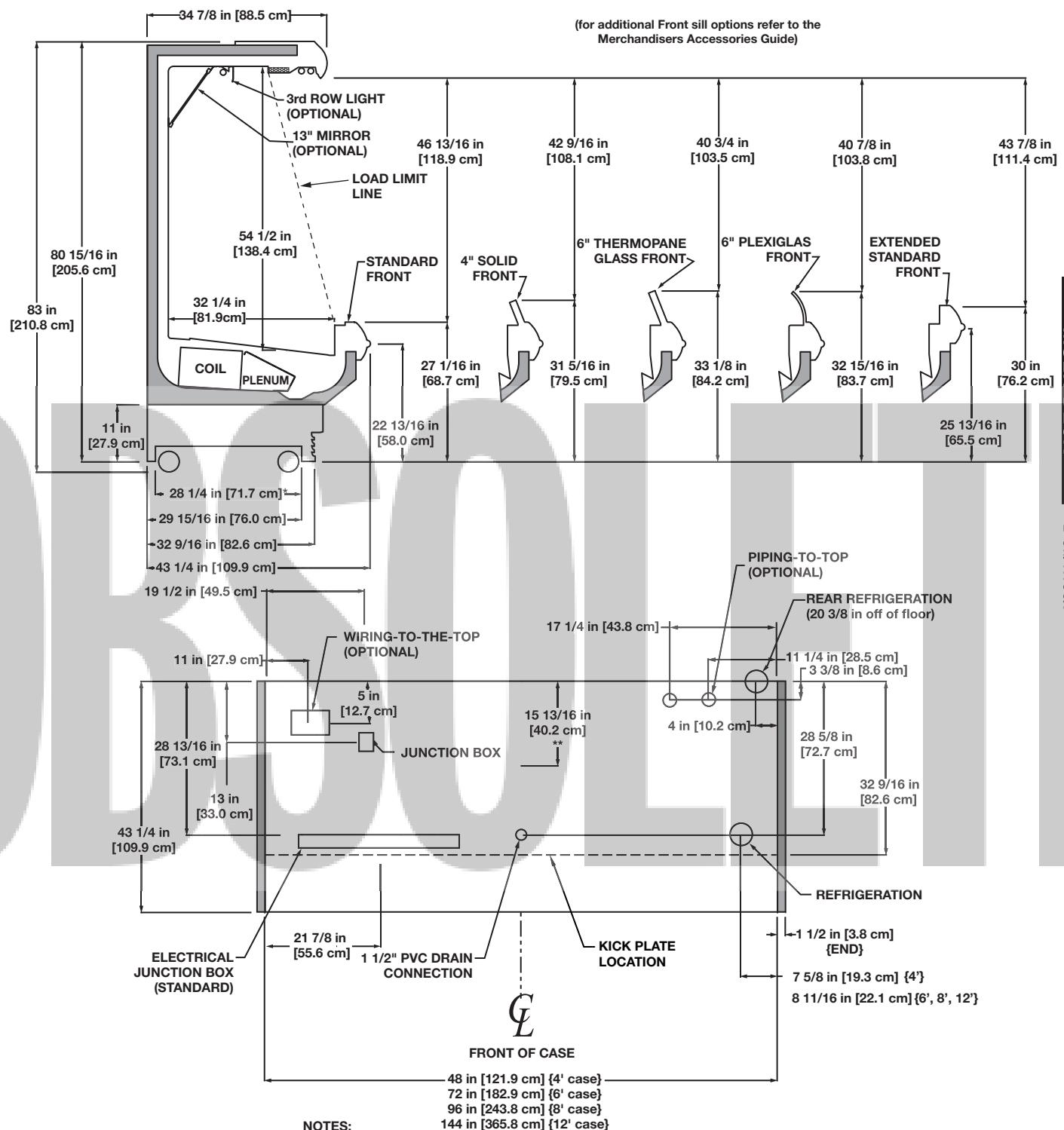
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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A DOVER COMPANY

OHMH-NRG
(11" BASEFRAME)

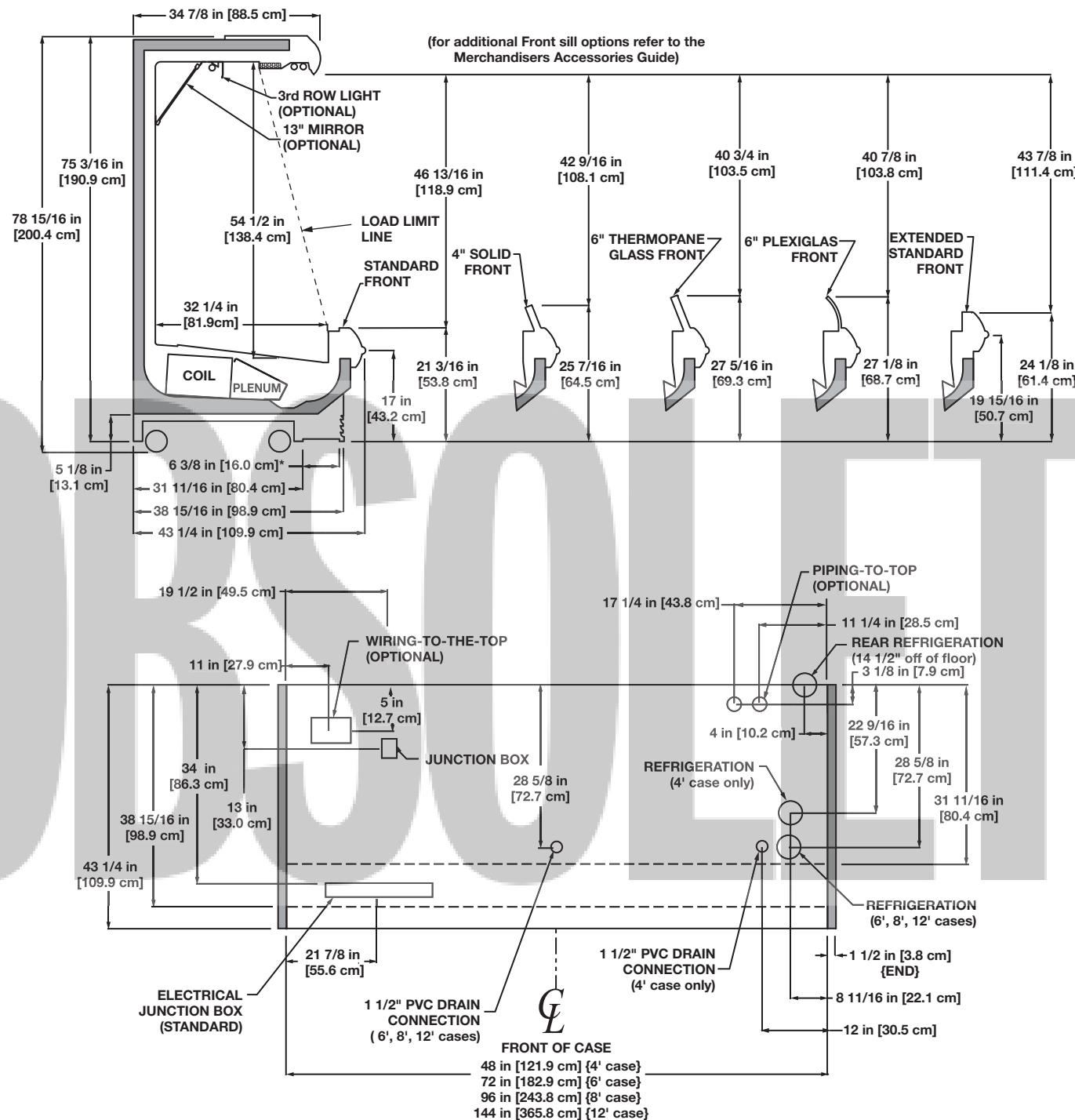
HILL PHOENIX®
EXCELENE
A DOVER COMPANY



OHMH-NRG

(5" BASEFRAME)

HILL PHOENIX®
A DOVER COMPANY



NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT SILL HEIGHT AND OVERALL CASE HEIGHT VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18", 20", 22" & 24"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Narrow Multi-Deck Produce Merchandiser

ONHP - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONHP	4'	2	1.00	60	0.47	28	---	1.92	400	2.22	532
	6'	2	1.00	60	0.47	28	---	2.88	600	3.33	798
	8'	3	1.50	90	0.70	42	---	3.85	800	4.44	1065
	12'	4	2.00	120	0.93	56	---	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts		
ONHP	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
ONHP Cut Produce	1198	6-8	26	32	45	350
ONHP Bulk Produce	818	6-8	29	36	48	250

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONHP	3	6-8	35	47	45	47	---	---	45	45

1 “---” indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

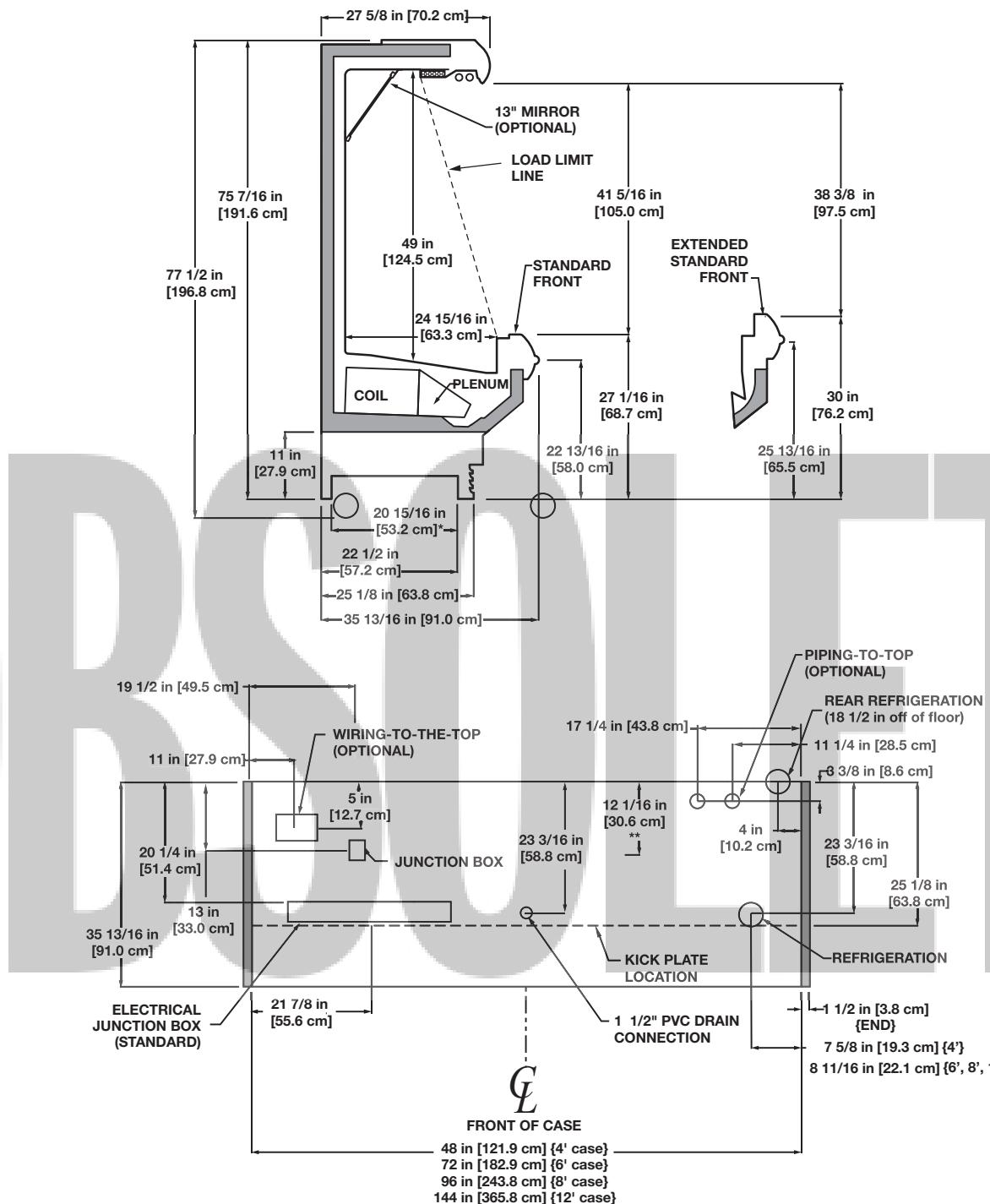
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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High Narrow Multi-Deck Produce Merchandiser

ONHPH - 4', 6', 8' & 12'

Electrical Data

Model		Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
			120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
			Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONHPH	4'	2	1.00	60	0.47	28	---	---	1.92	400	2.22	532
	6'	3	1.50	90	0.70	42	---	---	2.88	600	3.33	798
	8'	4	2.00	120	0.93	56	---	---	3.85	800	4.44	1065
	12'	5	2.50	150	1.17	70	---	---	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
ONHPH	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (F°)	Evaporator (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ³ Air Velocity (FPM)
ONHPH	1210	6-8	26	34	46	330
	825	6-8	29	37	47	230

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)
ONHPH	3	6-8	35	47	45	47	---	---	45	45

1 “---” indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

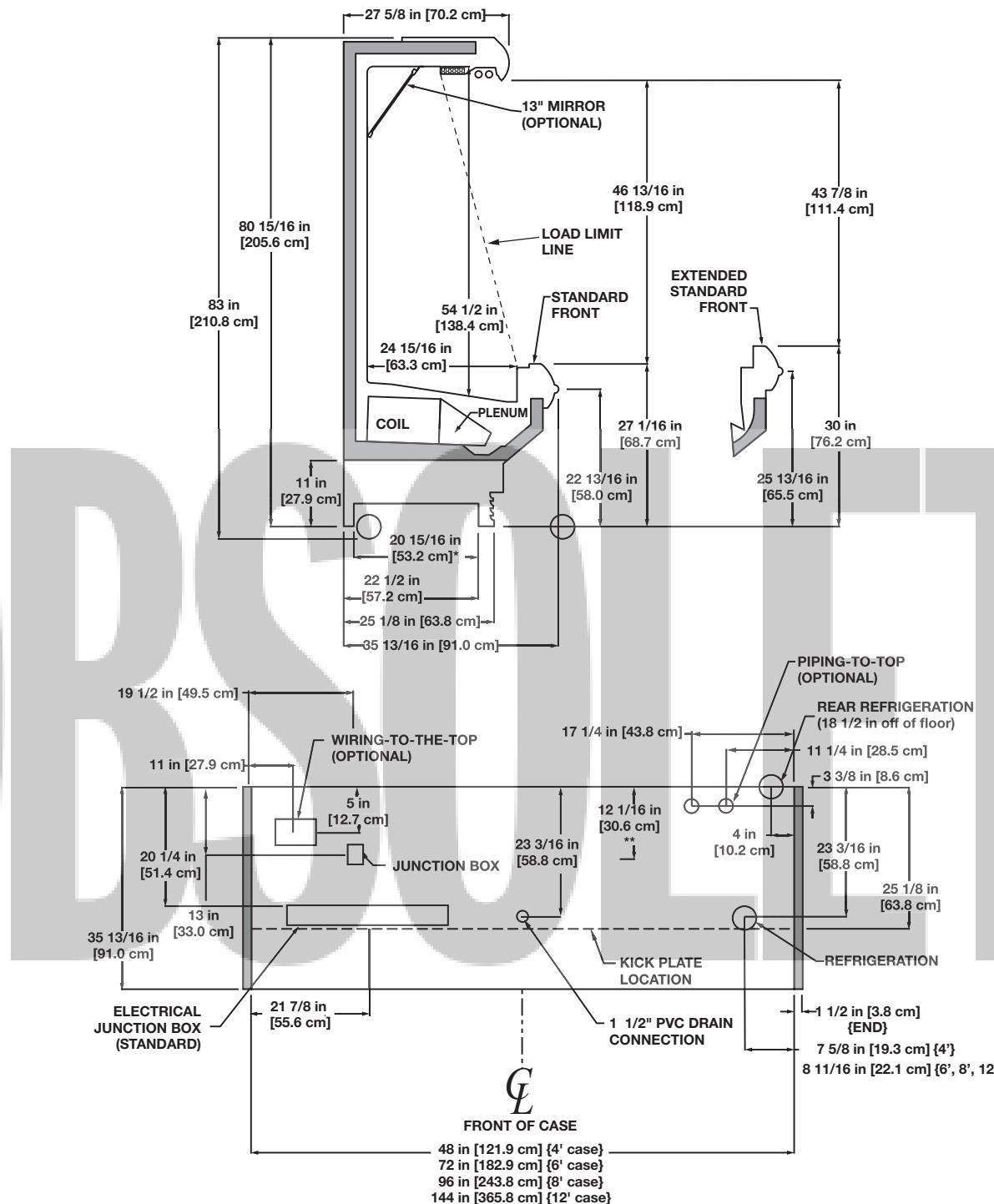
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY

**NOTES:**

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** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

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- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-TOP ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18" & 20"
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12", 1-14", 1-16" & 1-18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Multi-Deck Produce Merchandiser

OHP - 4', 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OHP	4'	2	1.00	60	0.47	28	0.30	36	1.92	400	2.22	532
	6'	2	1.00	60	0.47	28	0.44	48	2.88	600	3.33	798
	8'	3	1.50	90	0.70	42	0.58	70	3.85	800	4.44	1065
	12'	4	2.00	120	0.93	56	0.83	100	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
			120 Volts		120 Volts		120 Volts		
OHP	4'	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (F°)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
OHP	1103	6-8	26	31	45	350
	743	6-8	29	36	48	250

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OHP	3	6-8	35	47	45	47	26	45	30	45

1 Anti-condensate heater data for reduced (cut produce) temperature option only.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

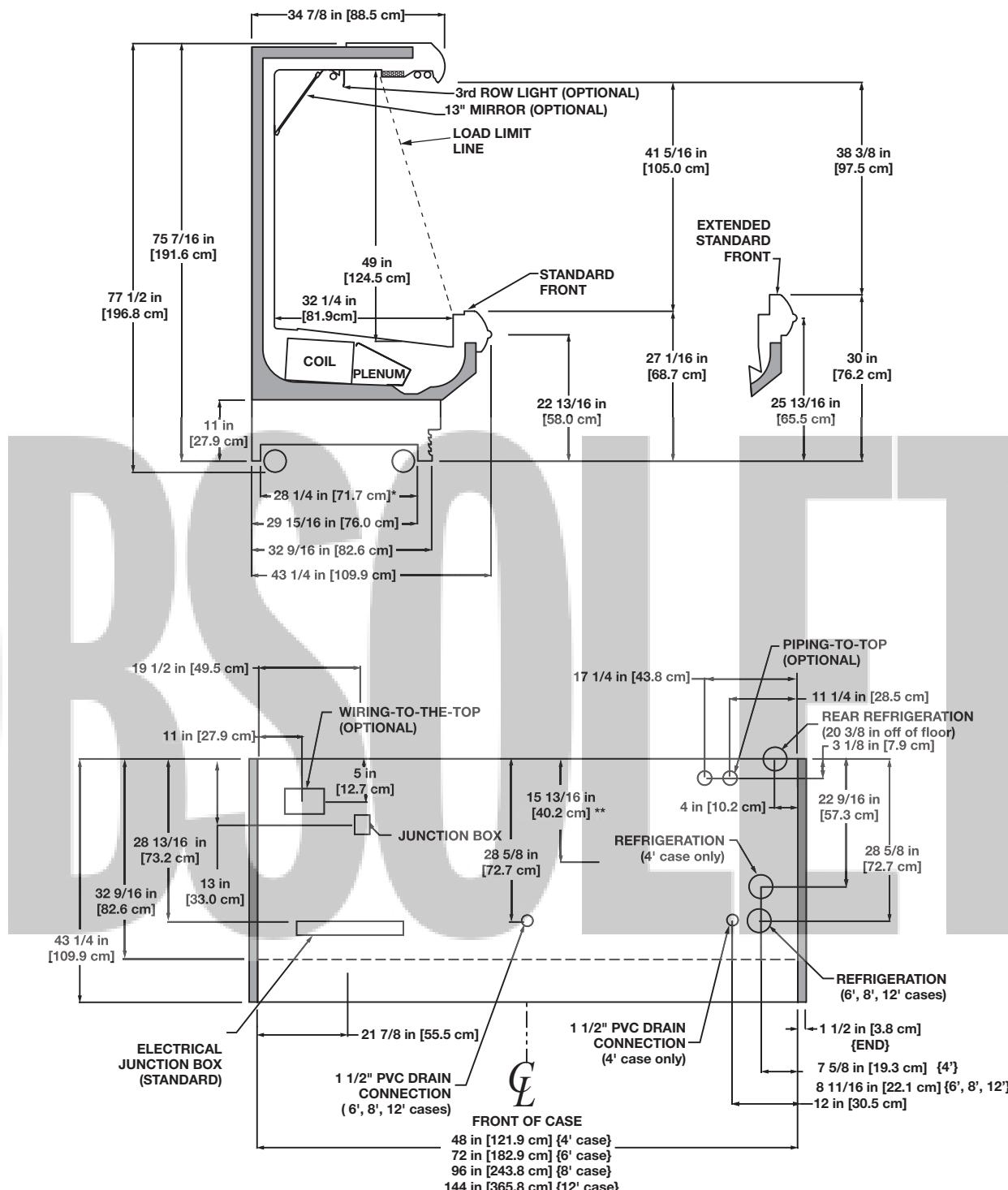
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE
A DOVER COMPANY

**NOTES:**

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- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18" & 20"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



High Multi-Deck Produce Merchandiser

OPHP- 6', 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OPHP	6'	3	1.50	90	0.70	42	---	---	2.88	600	3.33	798
	8'	4	2.00	120	0.93	56	---	---	3.85	800	4.44	1065
	12'	5	2.50	150	1.17	70	---	---	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts		120 Volts		120 Volts		
OPHP	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
OPHP Cut Produce	1340	6-8	26	30	45	330
OPHP Bulk Produce	1095	6-8	29	31	45	230

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OPHP	3	6-8	35	47	45	47	26	45	50	45

1 Anti-condensate heater data for reduced (cut produce) temperature option only.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

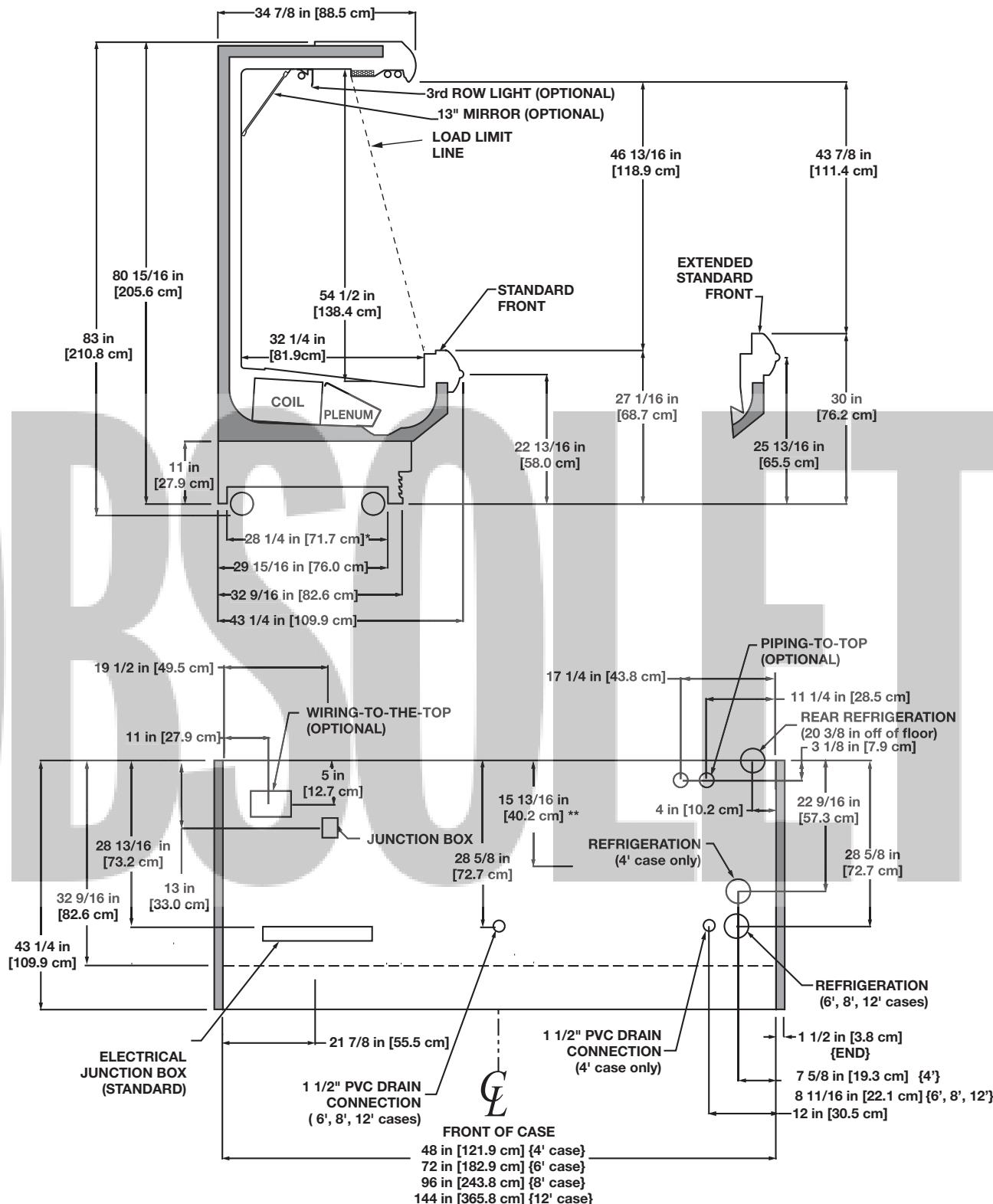
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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Wide Multi-Deck Produce Merchandiser

OWHP - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OWHP	8'	3	1.50	90	0.70	42	0.58	70	3.85	800	4.44	1065
	12'	4	2.00	120	0.93	56	0.83	100	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)							
				Standard Power (Cornice or Shelf)		High Power (Cornice)					
			120 Volts	120 Volts		120 Volts					
Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts				
OWHP	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4		
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6		

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (F°)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
OWHP Cut Produce	1480	6-8	26	31	45	350
OWHP Bulk Produce	1008	6-8	29	36	48	250

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OWHP	3	6-8	35	47	45	47	26	45	50	45

1 Anti-condensate heater data for reduced (cut produce) temperature option only.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

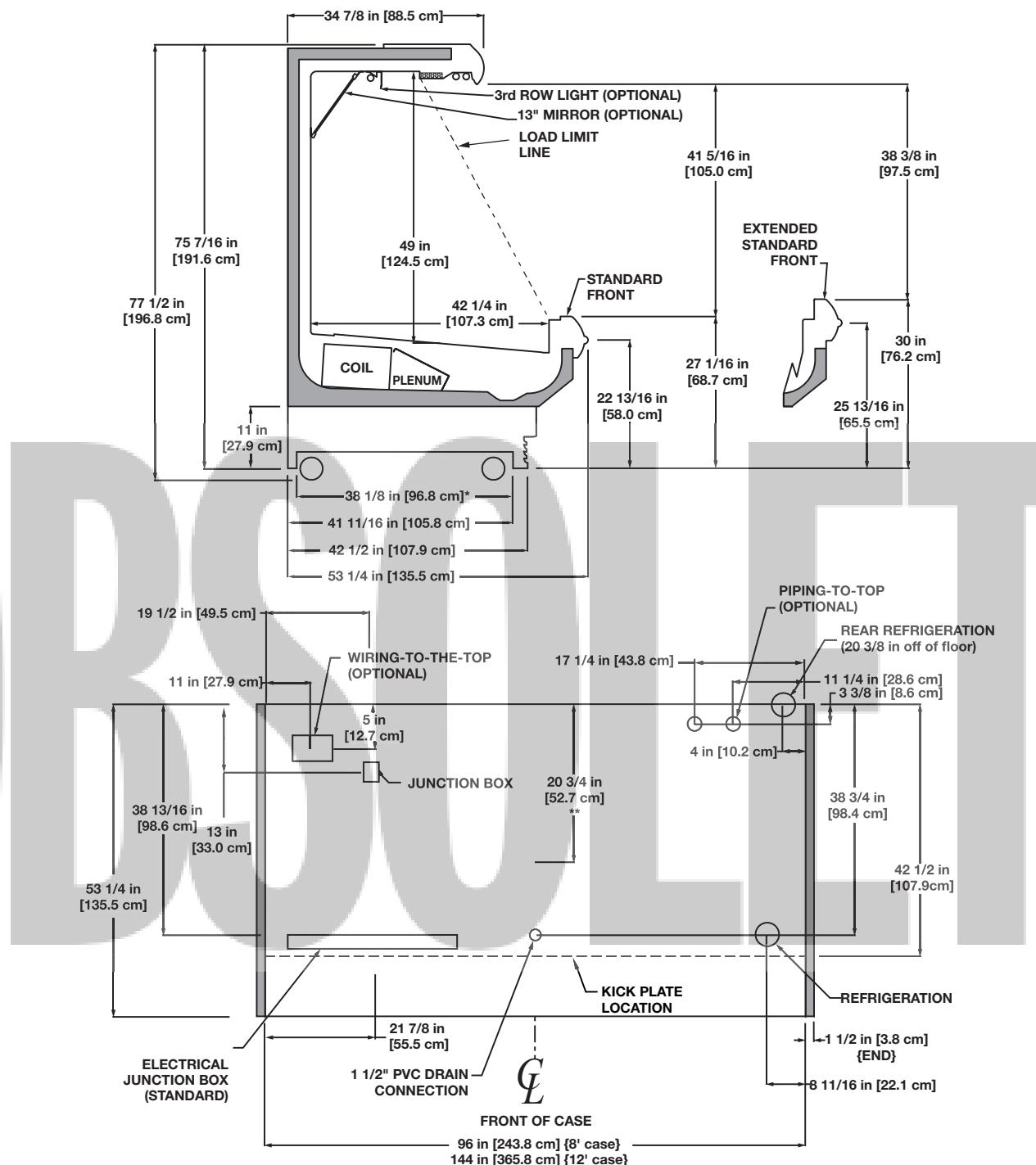
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE
A DOVER COMPANY

**NOTES:**

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT SILL HEIGHT AND OVERALL CASE HEIGHT VARY WITH BASEFRAME HEIGHT
- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18", 20" & 22"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Wide High Multi-Deck Produce Merchandiser

OWHPH - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate ¹ Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OWHPH	8'	4	2.00	120	0.93	56	0.58	70	3.85	800	4.44	1065
	12'	5	2.50	150	1.17	70	0.83	100	5.77	1200	6.67	1600

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts		120 Volts		120 Volts		
			Amps	Watts	Amps	Watts	Amps	Watts	
OWHPH	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulk (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
OWHPH Cut Produce	1793	6-8	26	30	45	330
OWHPH Bulk Produce	1472	6-8	29	31	45	230

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OWHPH	3	6-8	35	47	45	47	26	45	50	45

¹ Anti-condensate heater data for reduced (cut produce) temperature option only.

² BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

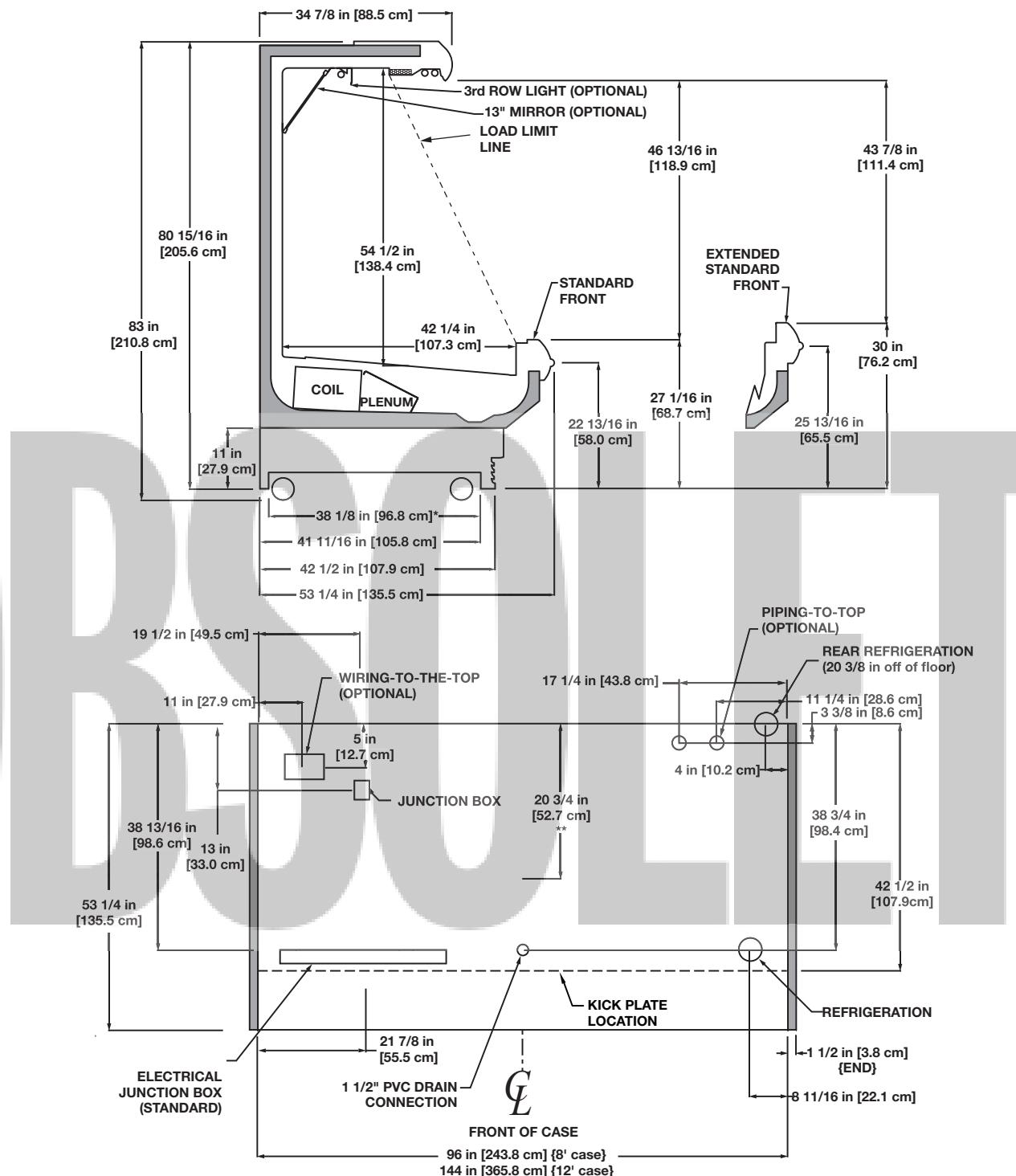
³ Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE
A DOVER COMPANY



MULTI-DECK
Produce

NOTES:

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- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- AVAILABLE SHELF SIZES: 10", 12", 14", 16", 18", 20" & 22"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Narrow Multi-Deck Self-Contained Dairy Merchandiser

ONNA - 36", 47", 71", & 95"

System Requirements

Model	Volts	Phase	Frequency (Hz)	System Amperage	HP	RLA ¹ (amps)	LRA ² (amps)	Refrig.	Plug Style
ONNA	36"	120	1	60	30	1/2	12.9	66.6	R134A
	47"	120	1	60	30	1/2	12.9	66.6	R134A
	71"	208	1	60	30	1	16.0	82	R134A
	95"	208	1	60	30	1-1/2	16.0	82	R134A

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ³ Air Velocity (FPM)
ONNA	36"	37.2	19.9	6-8	35	43
	47"	37.2	19.9	6-8	35	43
	71"	50.1	19.9	6-8	35	43
	95"	63.0	19.9	6-8	35	43

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed-Off Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONNA 36"/47"	6	---	---	28	52	---	---
ONNA 72"/96"	6	---	---	40	47	---	---

1 RLA = Running Load Amps

2 LRA = Locked Rotor Amps

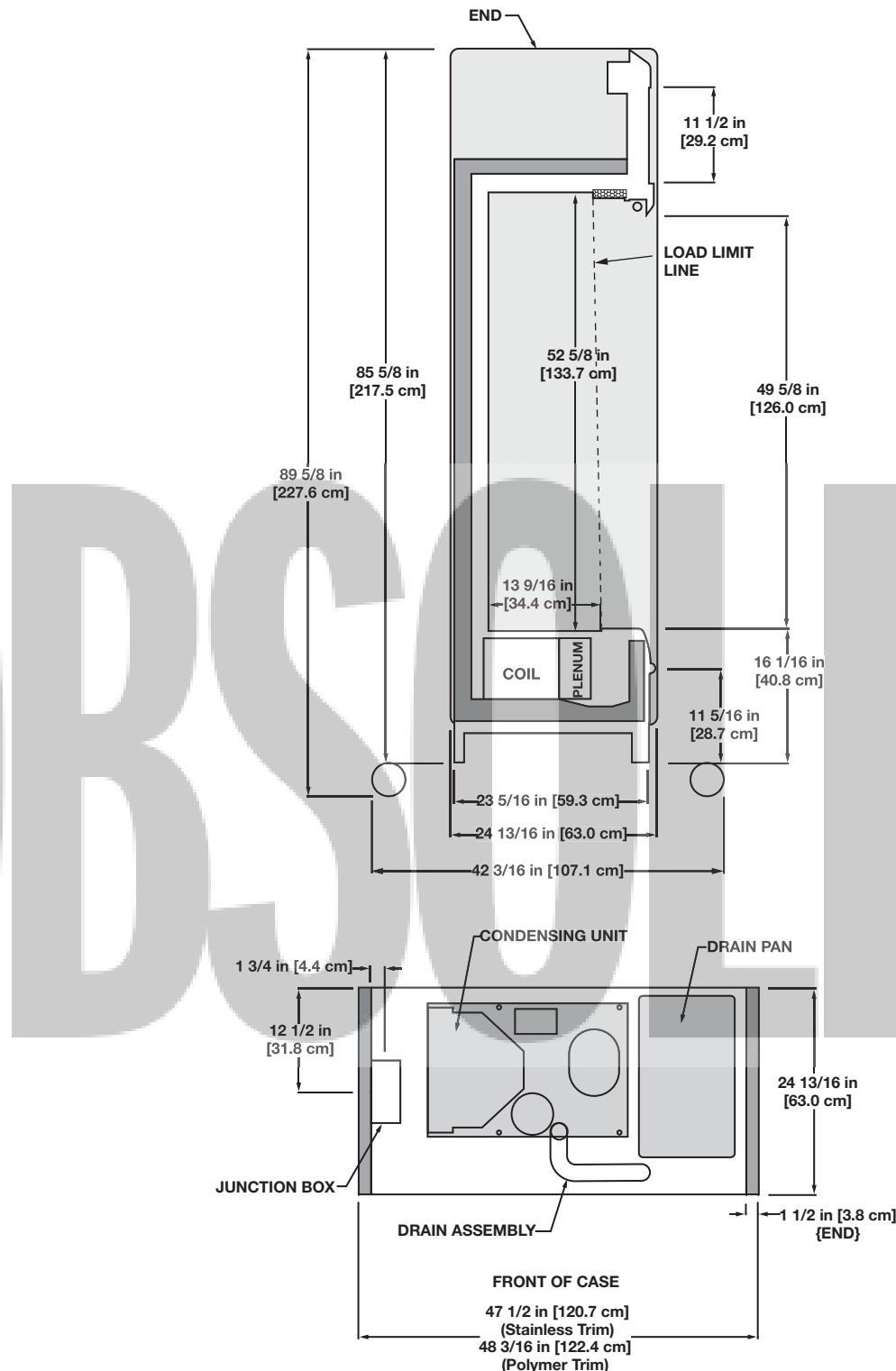
3 Average discharge air velocity at peak of defrost.

4 NOTE: "---" not an option on this case model.

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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MULTI-DECK
Dairy

NOTES:

- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- ENDS ARE ALSO AVAILABLE IN 1" WIDTHS
- AVAILABLE SHELF SIZES: 12"



Narrow Multi-Deck Self-Contained Dairy Merchandiser

ONNNA - 36", 47", 71", & 95"

System Requirements

Model	Volts	Phase	Frequency (Hz)	System Amperage	HP	RLA ¹ (amps)	LRA ² (amps)	Refrig.	Plug Style
ONNNA	36"	120	1	60	30	1/2	12.9	66.6	R134A
	47"	120	1	60	30	1/2	12.9	66.6	R134A
	71"	208	1	60	30	1	16.0	82	R134A
	95"	208	1	60	30	1-1/2	16.0	82	R134A

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ³ Air Velocity (FPM)
ONNNA	36"	37.2	19.9	6-8	35	43
	47"	37.2	19.9	6-8	35	43
	71"	50.1	19.9	6-8	35	43
	95"	63.0	19.9	6-8	35	43

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed-Off Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONNNA 36"/47"	6	-- ⁴	--	28	52	--	--
ONNNA 72"/96"	6	--	--	40	47	--	--

1 RLA = Running Load Amps

2 LRA = Locked Rotor Amps

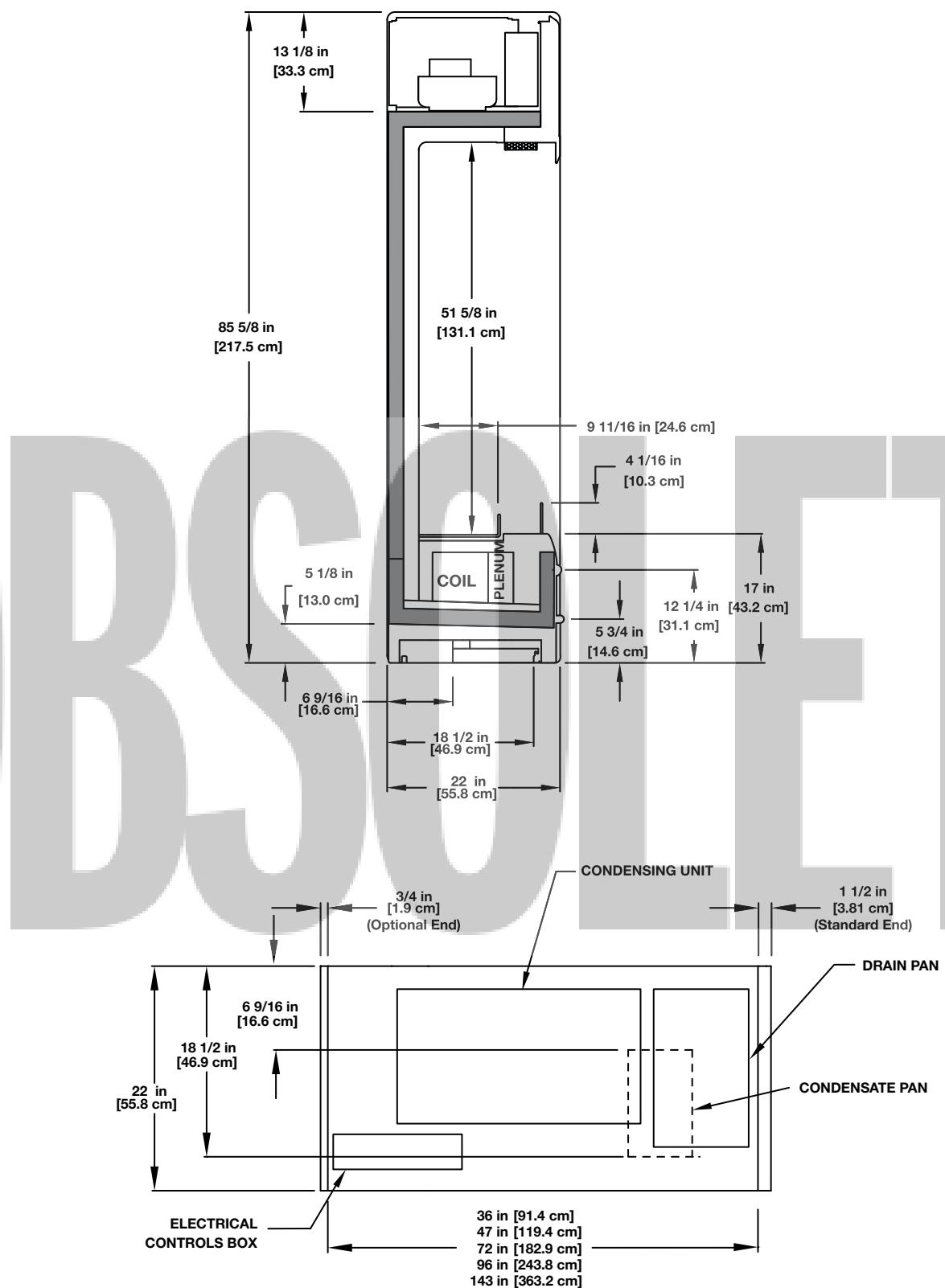
3 Average discharge air velocity at peak of defrost.

4 NOTE: "--" not an option on this case model.

All measurements are taken per ARI 1200 - 2002 specifications.



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Narrow Multi-Deck Produce/Dairy/Deli/Meat Merchandiser

ONU - 4'47" & 6'71"

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONU	4'47"	2	1.00	60	0.47	28	---	1.92	400	2.22	532
	6'71"	3	1.50	90	0.70	42	---	2.88	600	3.33	798

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts		120 Volts		120 Volts		
ONU	4'47"	1	4'	0.23	28	0.10	11.9	0.22	26.2
	6'71"	2	3'	0.37	44	0.14	16.6	0.30	35.8

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (F°)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
ONU ²	1322	6-8	17	31	40	310

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost ⁴		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONU	6	6-8	35	47	45	47	25	45	---	---

1 " --- " indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.11.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

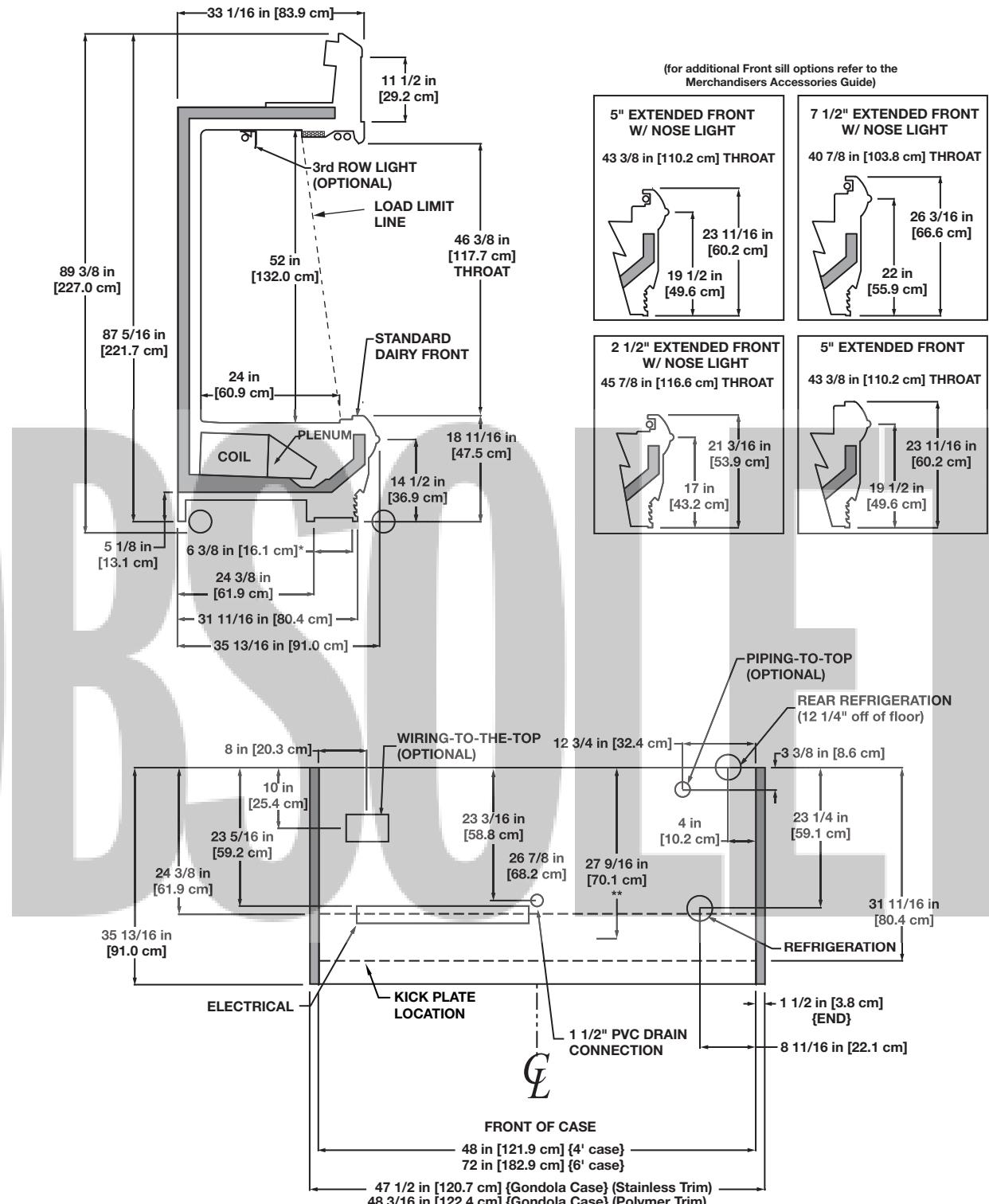
3 Average discharge air velocity at peak of defrost.

4 Timed-Off defrost not recommended for Fresh Meat application

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE
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MULTI-DECK

Produce/Dairy/Deli/Meat



Narrow Multi-Deck Self-Contained Produce/Dairy/Deli/Meat Merchandiser

ONUA - 4'47" & 6'

System Requirements

Model	Volts	Phase	Hz	Wire	Plug Style	Minimum Circuit Ampacity	Maximum Overcurrent Protection
ONUA	4'47"	208	1	60	3 wire + ground	NEMA L14-30	16.220
	6'71"	208	1	60	3 wire + ground	NEMA L14-30	22.000

Electrical Data

Model	Fans per Case	Standard Fans		Condenser Fans		Drain Pump		Evaporator Pan Heater		Maximum Lights	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONUA	4'47"	2	1.00	60	2.60	130	0.90	108	7.21	1500	1.87
	6'71"	3	1.50	90	1.10	114	0.90	108	7.21	1500	2.93
											352

Guidelines & Control Settings

Model ¹	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge Air Velocity ² (FPM)
ONUA	4'47"	43.9	33	6-8	27.5	39
	6'71"	59.3	33	6-8	27.5	39

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ³ (amps)	LRA ⁴ (amps)	Refrig.	Lbs. of Refrig.
ONUA	208	1	60	1	7.0	34.2	R22	5.9
	208	1	60	1-1/2	10.4	48.2	R22	6.75

Defrost Controls

Model	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
	Defrosts Per Day	Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)	Termination Temp (F°)	Fail-Safe (min)
ONUA	4	- - - ⁵	- - -	40	45	- - -	- - -	- - -

1 Model ONUA only available for meat application with the 7 1/2" extended front w/ nose lights and no shelf lights.

2 Average discharge air velocity at peak of defrost.

3 RLA = Running Load Amps/V

4 LRA = Locked Rotor Amps

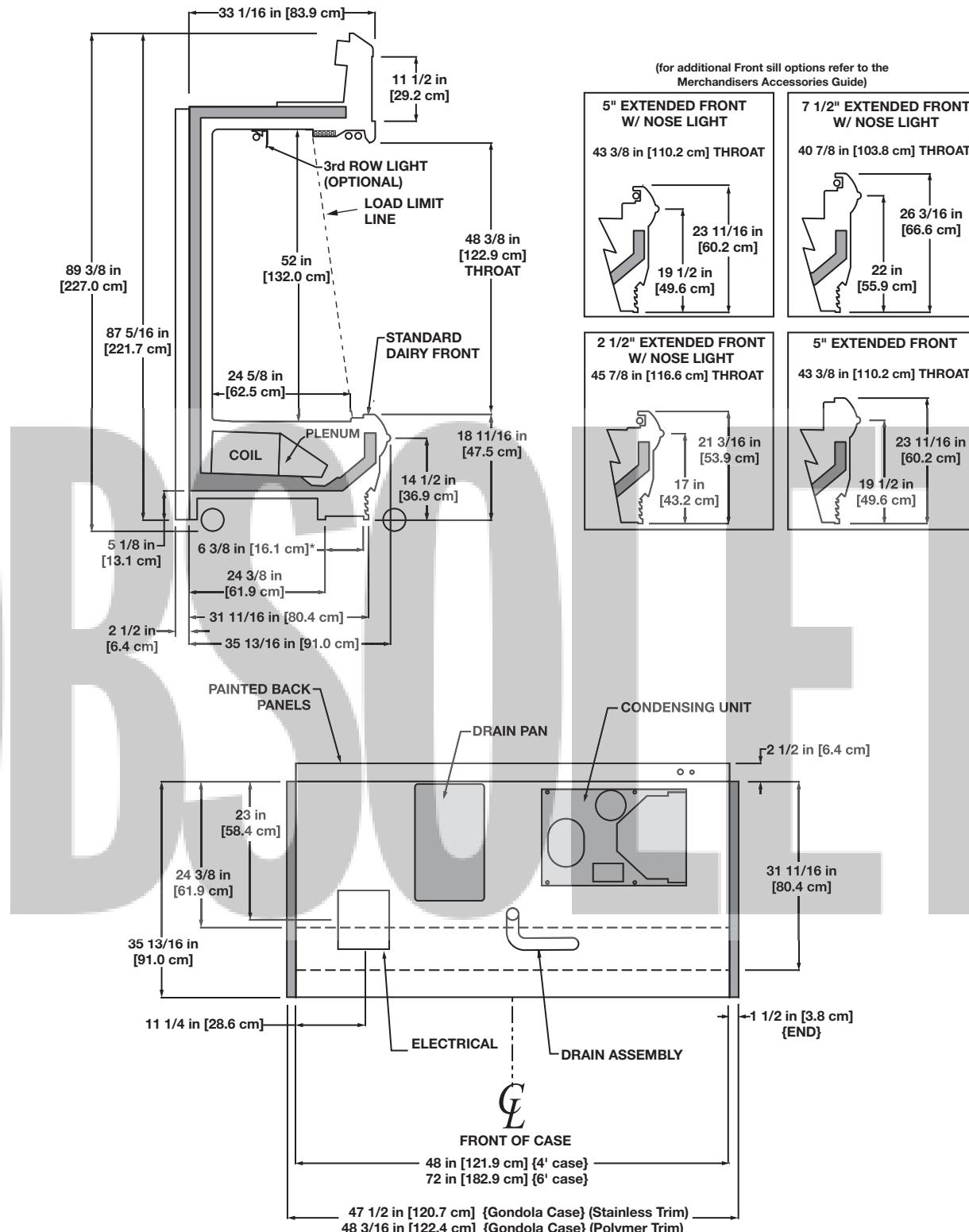
5 NOTE: " - - - " not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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MULTI-DECK

Produce/Dairy/Deli/Meat



Roll-In Rear Load Dairy Merchandiser with Synerg-E™

ORDR-NRG - 8' & 12'

Electrical Data

Model		Fans per Case		Upper High Efficiency Fans		Lower High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
				120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Upper	Lower	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ORDR-NRG	8'	3	4	0.73	56	0.97	72	0.58	70	3.85	800	4.44	1066
	12'	4	6	0.97	72	1.46	112	0.83	100	5.77	1200	6.67	1600

Lighting Data

Model		Bulbs per Row	Bulb Length	Typical per Light Row		Maximum Lighting	
				120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts
ORDR-NRG	8'	2	4'	0.47	56	4.17	500
	12'	3	4'	0.70	84	6.33	760

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ³ (°F)	Discharge ⁴ Air (°F)	Discharge ⁵ Air Velocity (FPM)
ORDR-NRG ¹	659	6 - 8	27	32	310

Defrost Controls

Model	Defrosts per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ORDR-NRG	6	30	47	30	47	26	45	---	---

1 Back-up coils must be used for each case to refrigerate the area immediately behind the line-up. Add 800 BTUH/ft of case opening to the normal walk-in cooler load. Use low-velocity coils to back up the rear load roll-in case for ceiling heights under 9' – for ceiling heights over 9', use high-velocity forced-air style coils. Each auxiliary coil should be centered on each case and set back a distance of 3' to 5' from the back of the ORDR. The cooler box must have a maximum temperature of no more than 34°F.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.14.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 92 BTUH per 4' lighted shelf and 69 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Add 132 BTUH/ft when aftermarket merchandising accessories are utilized to determine the total BTUH load.

3 Listed evaporator temperature indicates unlighted shelves. For lighted shelves and/or aftermarket merchandising accessories, reduce the listed evaporator temperature by 2°F.

4 Conventional Discharge Air Control – Recommended Settings: Cut-In Temp = Discharge Air + 2°F; Cut-Out Temp = Discharge Air - 2°F

5 Average discharge air velocity at peak of defrost.

6 NOTE: “---” not an option on this case model.

All measurements are taken per ARI 1200 - 2002 specifications.



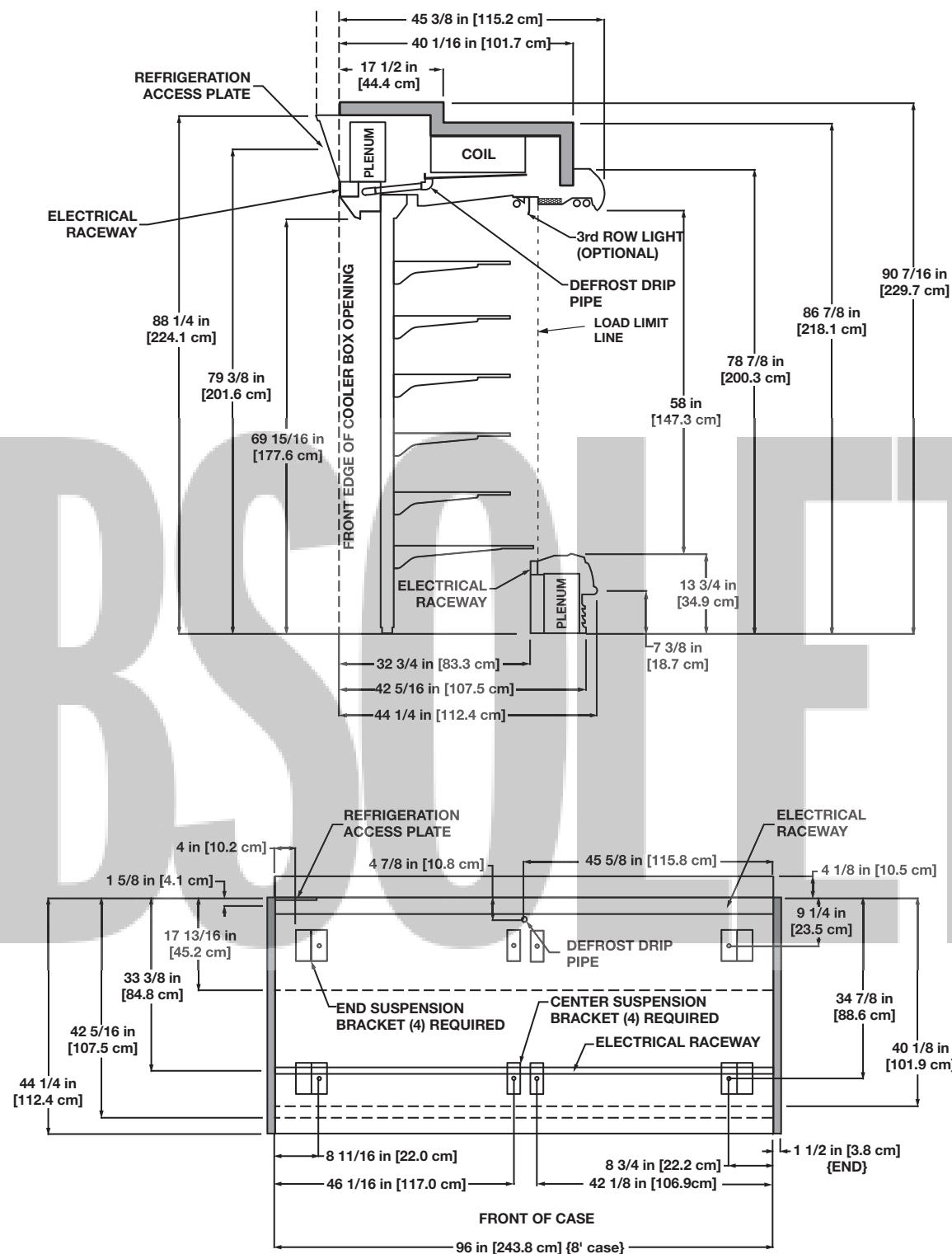
HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY

ORDR-NRG 8'

HILL PHOENIX®

EXCELL ENCL

A DOVER COMPANY



MULTI-DECK
Dairy

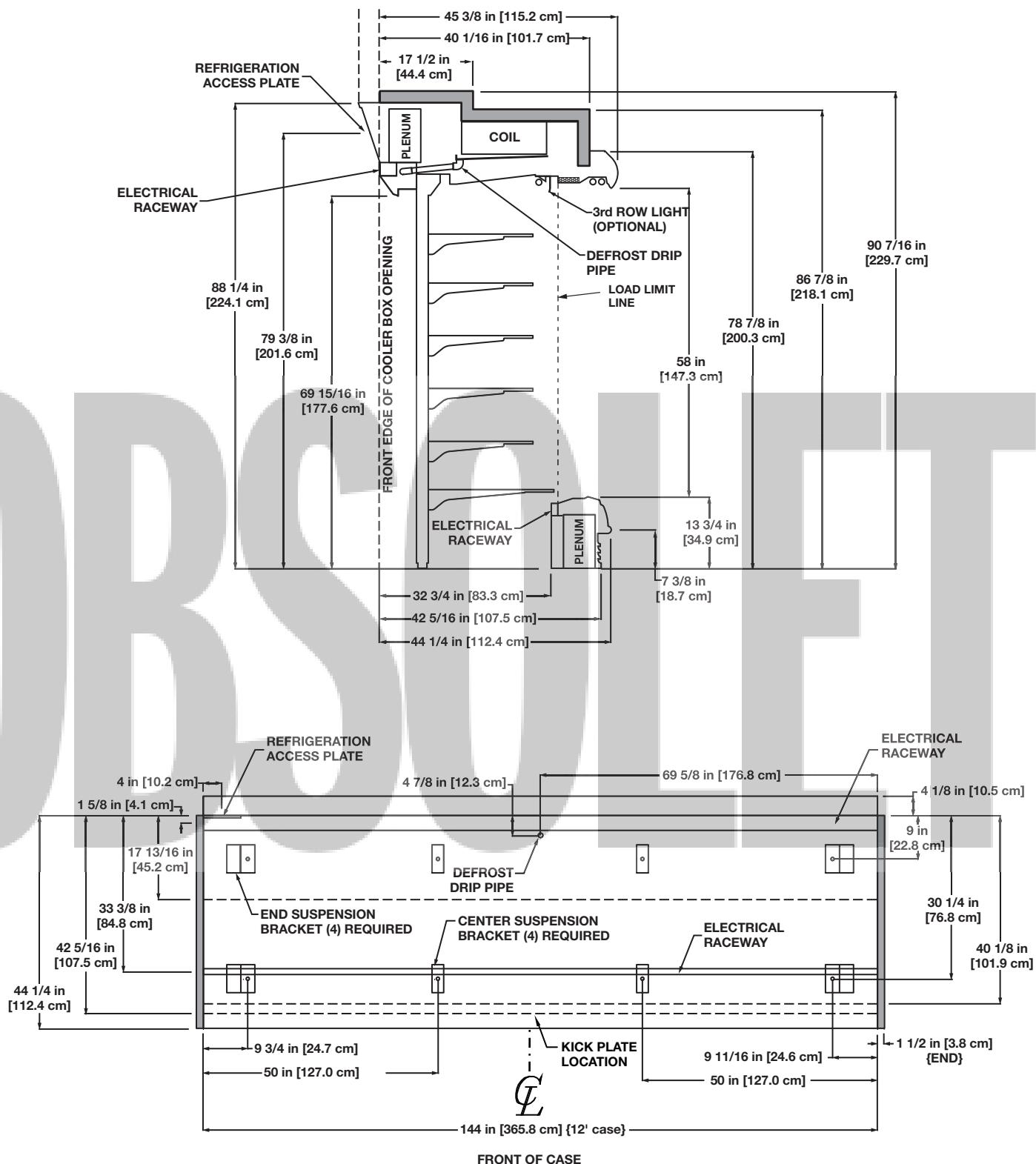


NOTES:

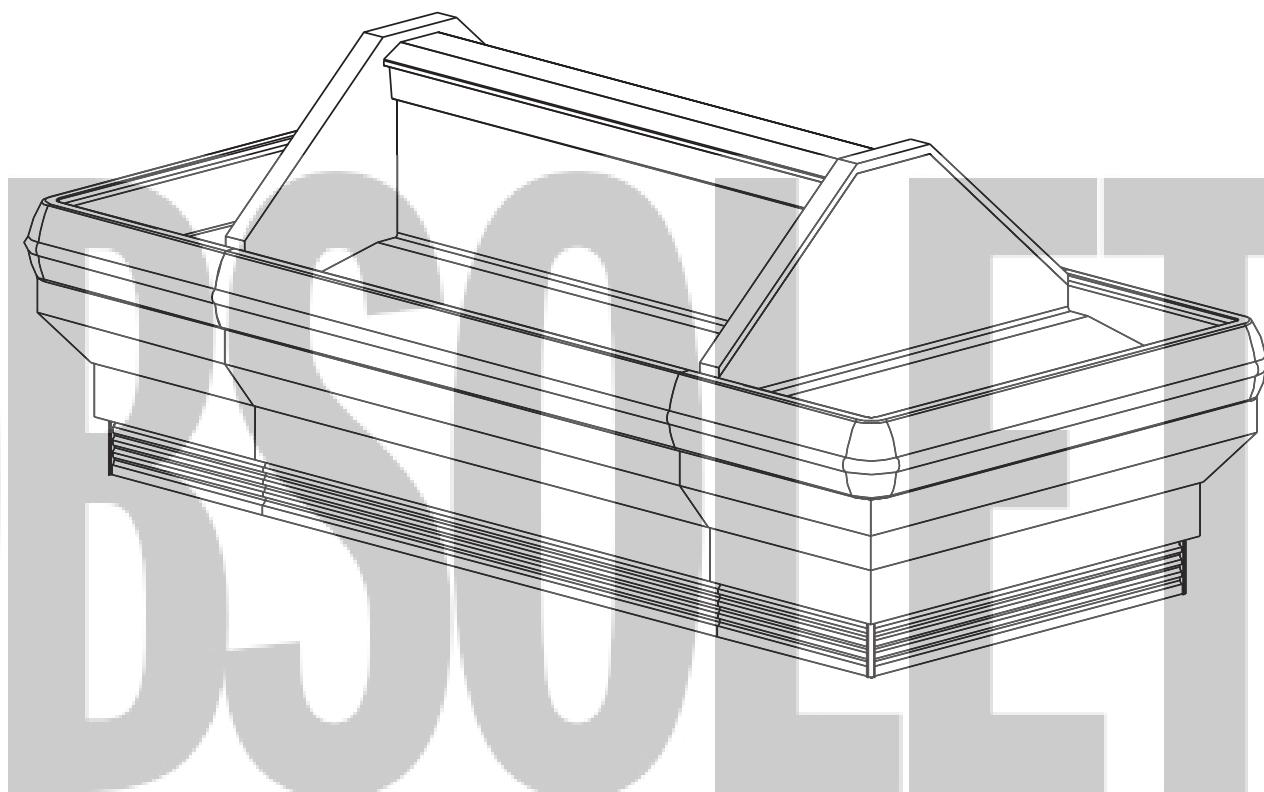
- AVAILABLE SHELF SIZES: 20" & 24"
- RECOMMENDED CONFIGURATION IS 5 ROWS OF 20" SHELVES WITH 1 ROW OF 24" SHELVES IN THE LOWEST POSITION

ORDR-NRG 12'

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END CAPS



END CAPS

NOTES

- Cases shown with an ANSI/NSF* mark are listed by NSF.
- Cases shown with a UL* mark are listed by Underwriters Laboratories Inc.
- Allow for an extra 1/8" per joint when lining up merchandisers.
- Technical information contained herein is subject to change without notice.

* ANSI - American National Standard Institute
NSF - National Sanitation Foundation
UL - Underwriters Laboratories Inc

Narrow Single-Deck Frozen Meat End Cap Merchandiser

ONEMZ

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONEMZ	2	1.00	60	0.23	14	0.35	42	2.88	600	3.33	798

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)			
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)	
			120 Volts		120 Volts	
			Amps	Watts	Amps	Watts
ONEMZ	1	5'	---	---	---	---

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air ³ Velocity (°F)
ONEMZ	1608	3-5	0	11	22	120

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONEMZ	2	13-15	45	47	---	---	20	60	---	---

1 “---” indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.07.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

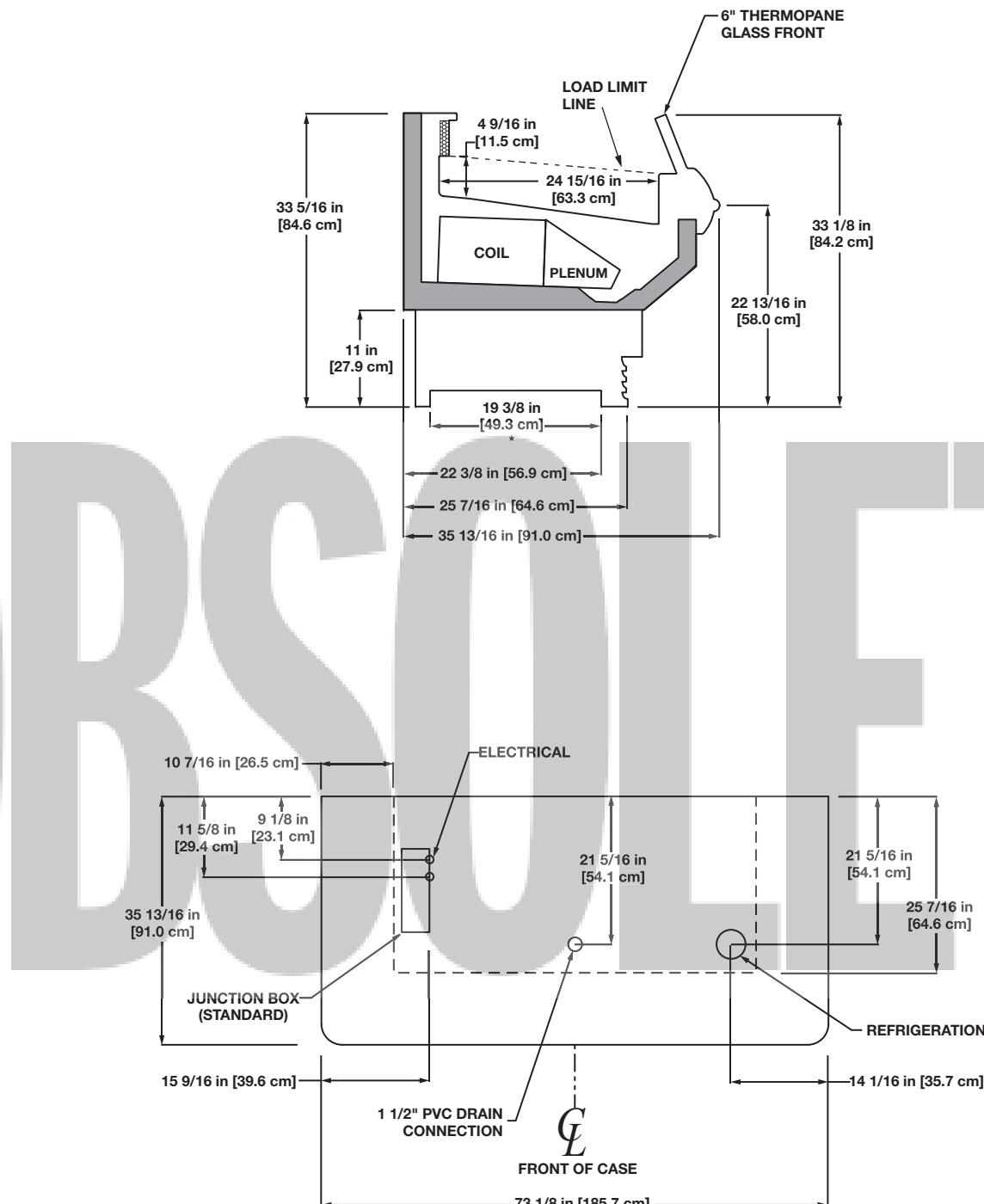
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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NOTES:

* STUB-UP AREA

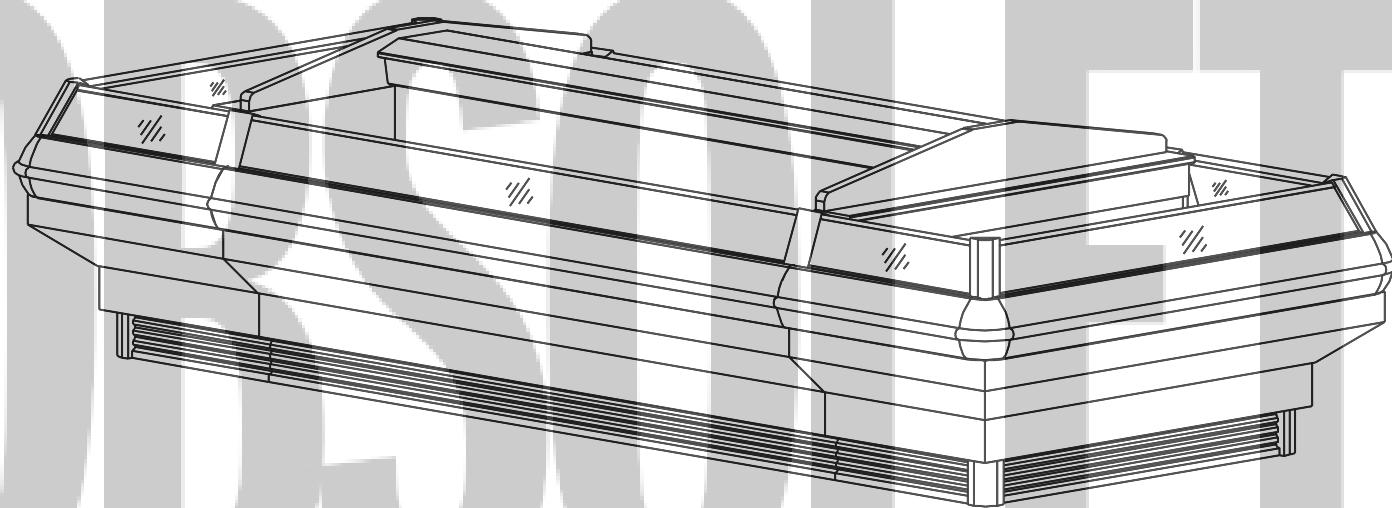
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



ONEMZ
3D Model

HILL PHOENIX®
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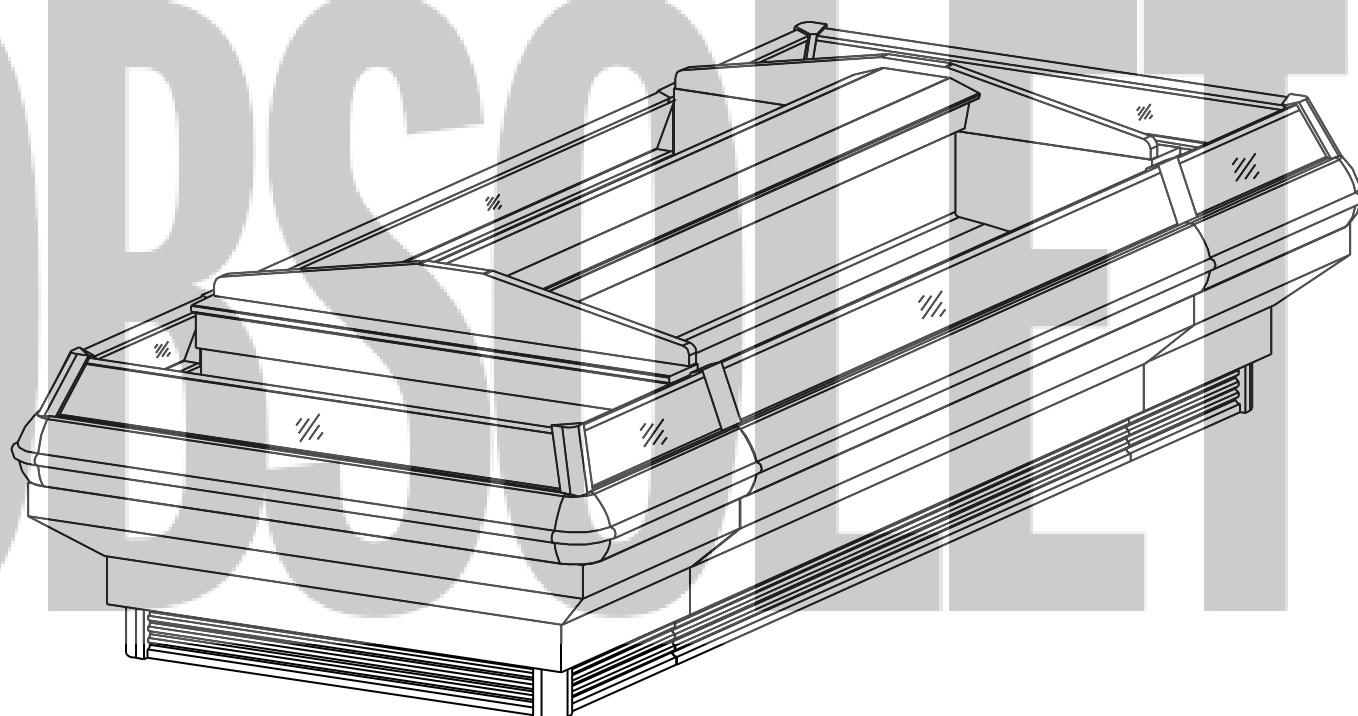
The ONEMZs shown below are unitized
with two ONMZ-8'cases with standard rear
sills, and thermopane glass fronts.



ONEMZ
3D Model

HILL PHOENIX
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A DOVER COMPANY

The ONEMZs shown below are unitized
with two ONMZ-8' cases with standard rear
sills, and thermopane glass fronts.



END CAPS

Frozen Meat



Single Deck Deli/Meat End Cap Merchandiser

OEM

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OEM	2	1.00	60	0.15	9.2	0.35	42	2.88	600	3.33	798

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)			
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)	
			120 Volts		High Power (Cornice)	
			Amps	Watts	Amps	Watts
OEM	2	3'	---	---	---	---

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air ³ Velocity (°F)
OEM	2726	6-8	22	29	37	232

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OEM	2	6-8	40	49	70	47	26	45	---	---

1 “---” indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.06.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

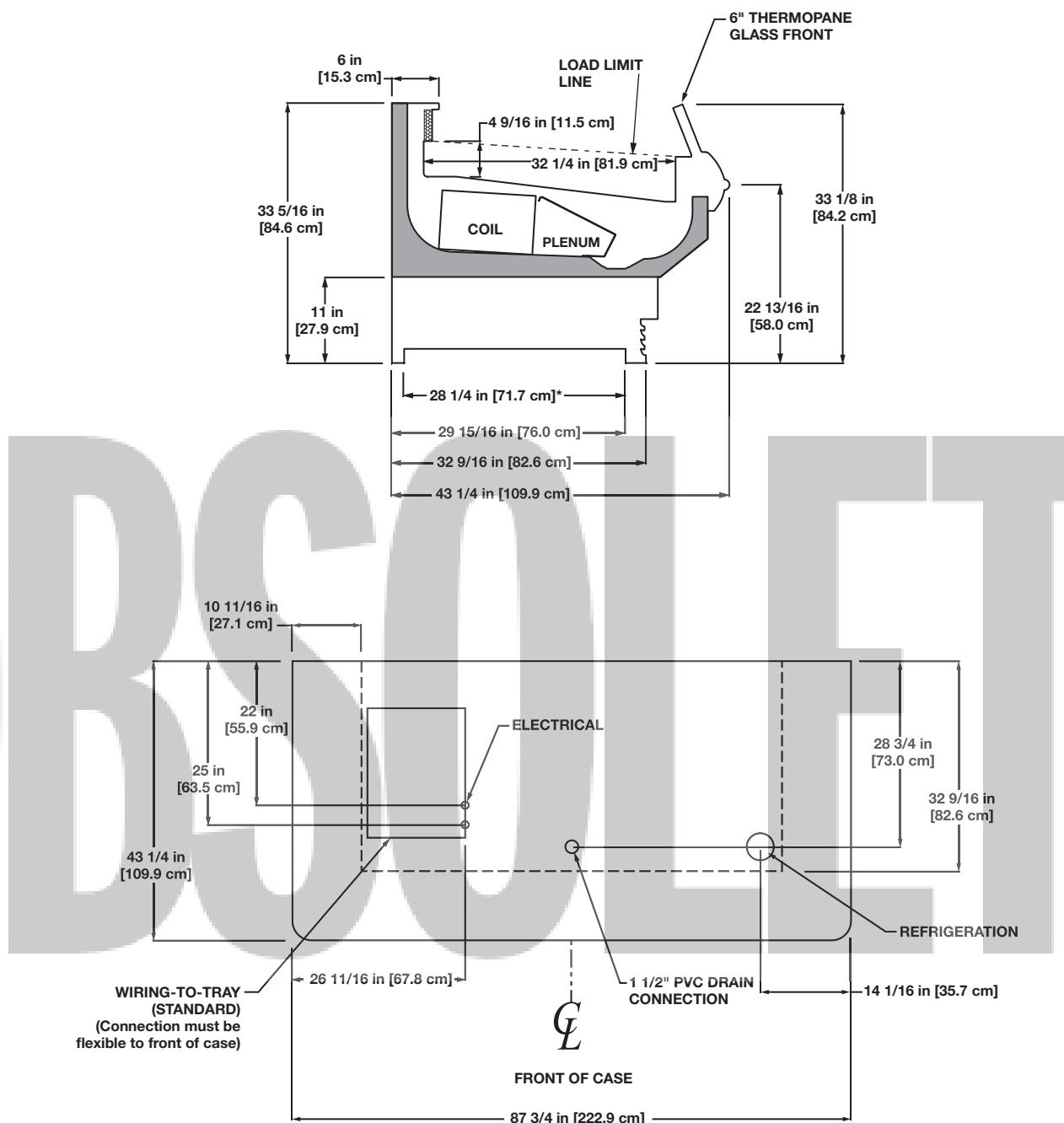
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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NOTES:

* STUB-UP AREA

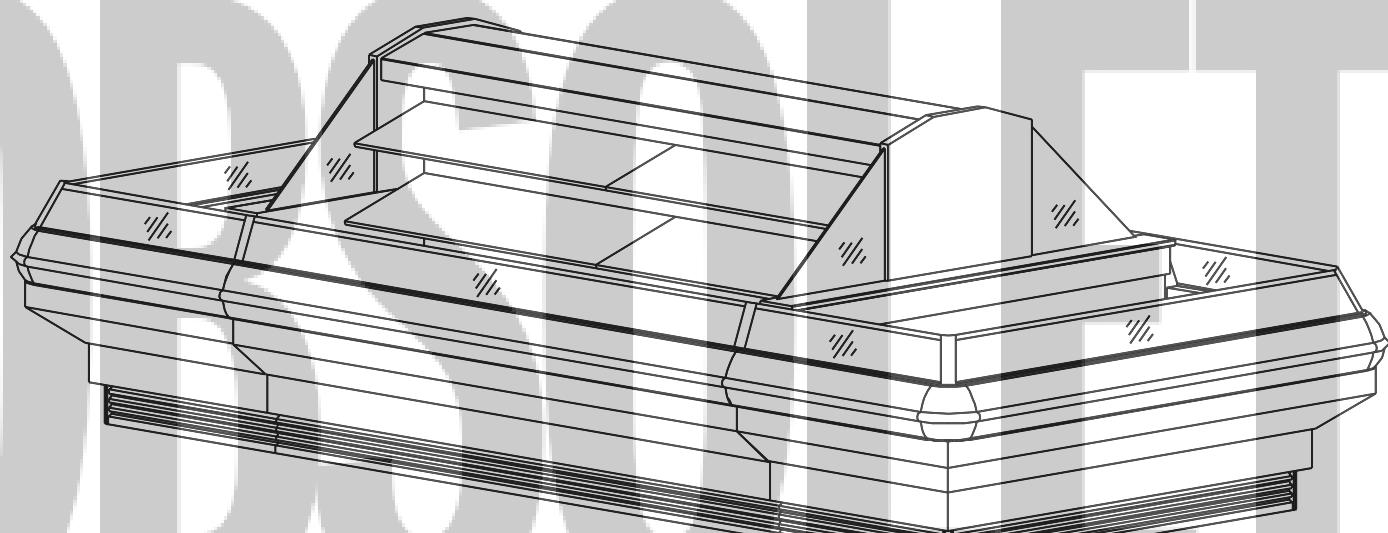
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OEM
3D Model

HILL PHOENIX
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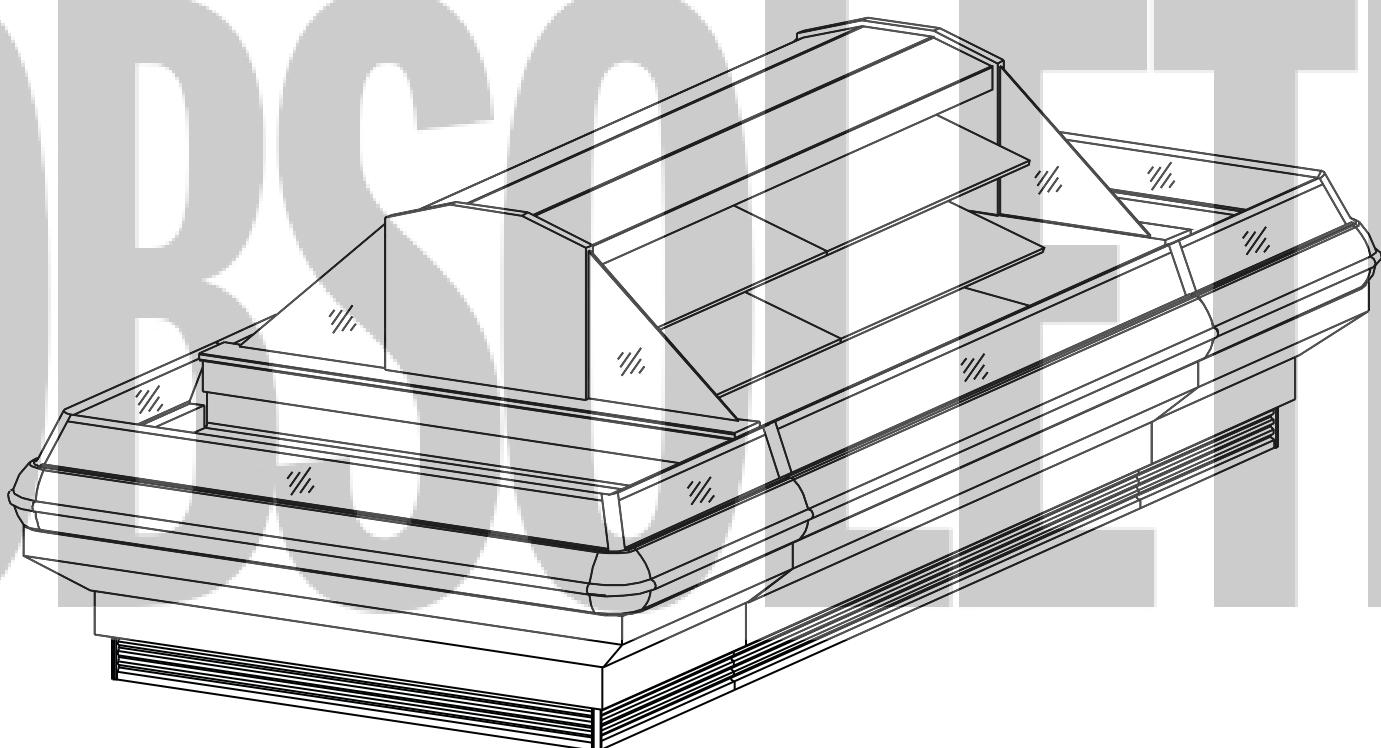
The OEMs shown below are unitized with
two O3UM-8'cases with lighted rear sills
and thermopane glass fronts.



OEM
3D Model

HILL PHOENIX®
EXCELENE
A DOVER COMPANY

The OEMs shown below are unitized with
two O3UM-8'cases with lighted rear sills
and thermopane glass fronts.



END CAPS

Deli/Meat



Narrow Multi-Deck Deli/Meat End Cap Merchandiser

ON3EM

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ON3EM	2	1.00	60	0.23	14	1.89	227	2.31	480	2.66	640

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)					
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)			
			120 Volts		120 Volts			
			Amps	Watts	Amps	Watts		
ON3EM	1	5'	0.28	34	0.12	14.3	0.27	32.1

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air ² Velocity (°F)
ON3EM	5648	6-8	22	33	45	275

Defrost Controls

Model	Defrosts per Day	Electric Defrost			Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Run-Off Time (min)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON3EM	4	6-8	40	47	45	45	---	---	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.13.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

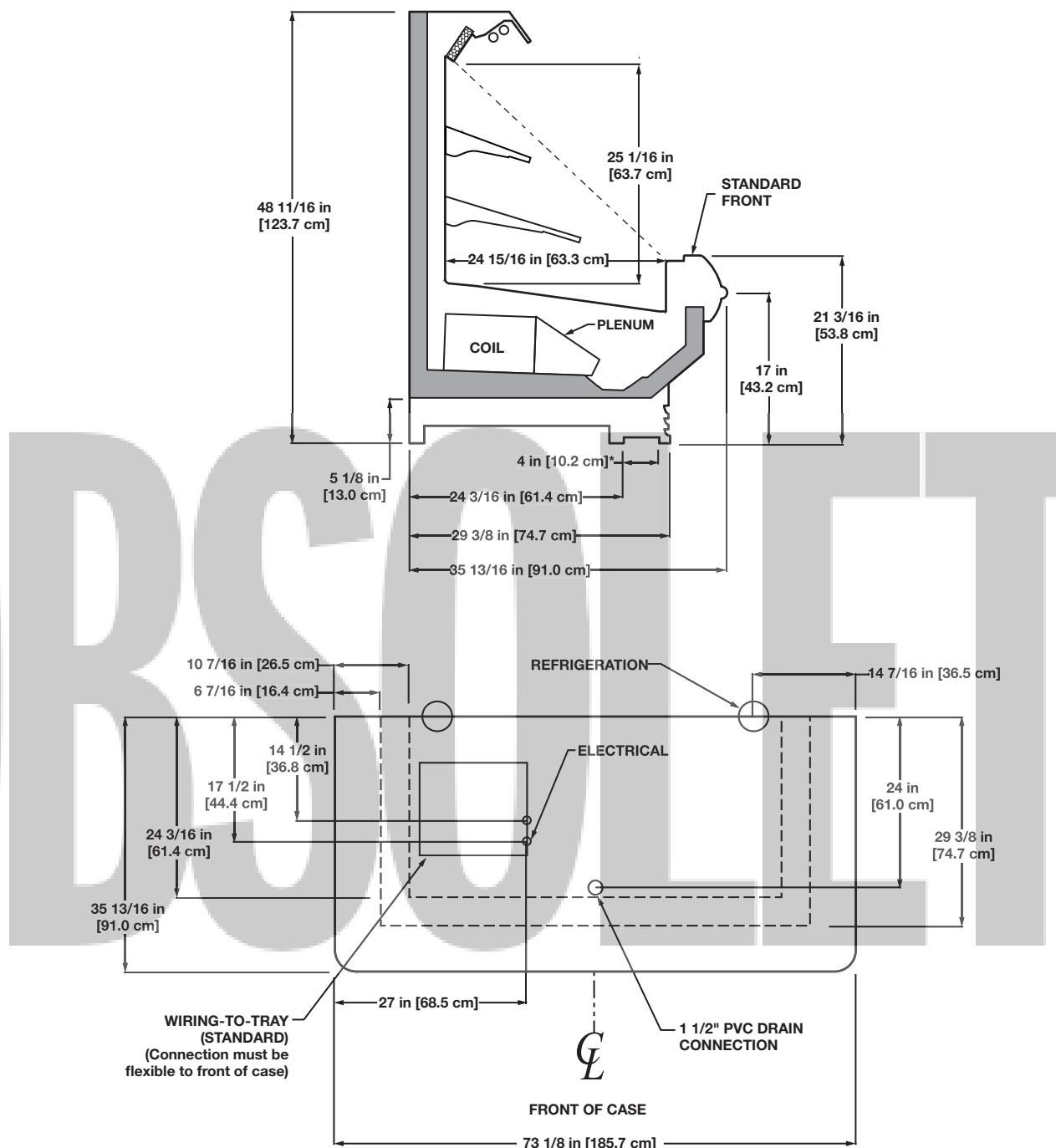
3 “---” indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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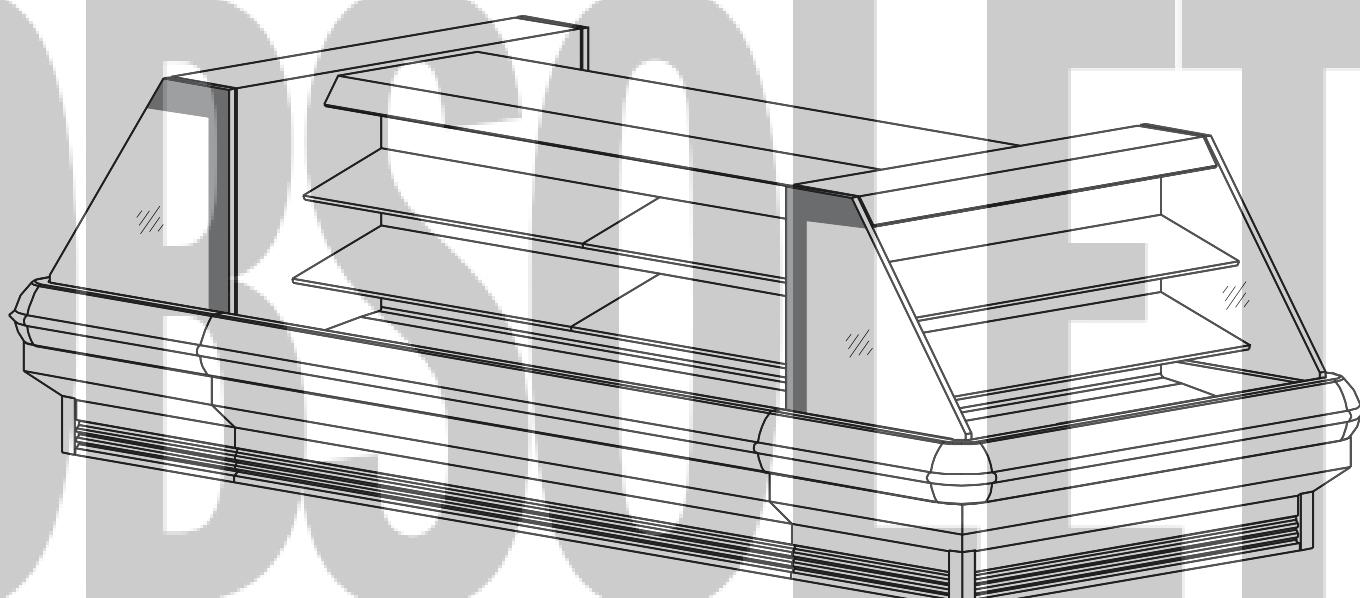
END CAPS
Deli/Meat



ON3EM
3D Model

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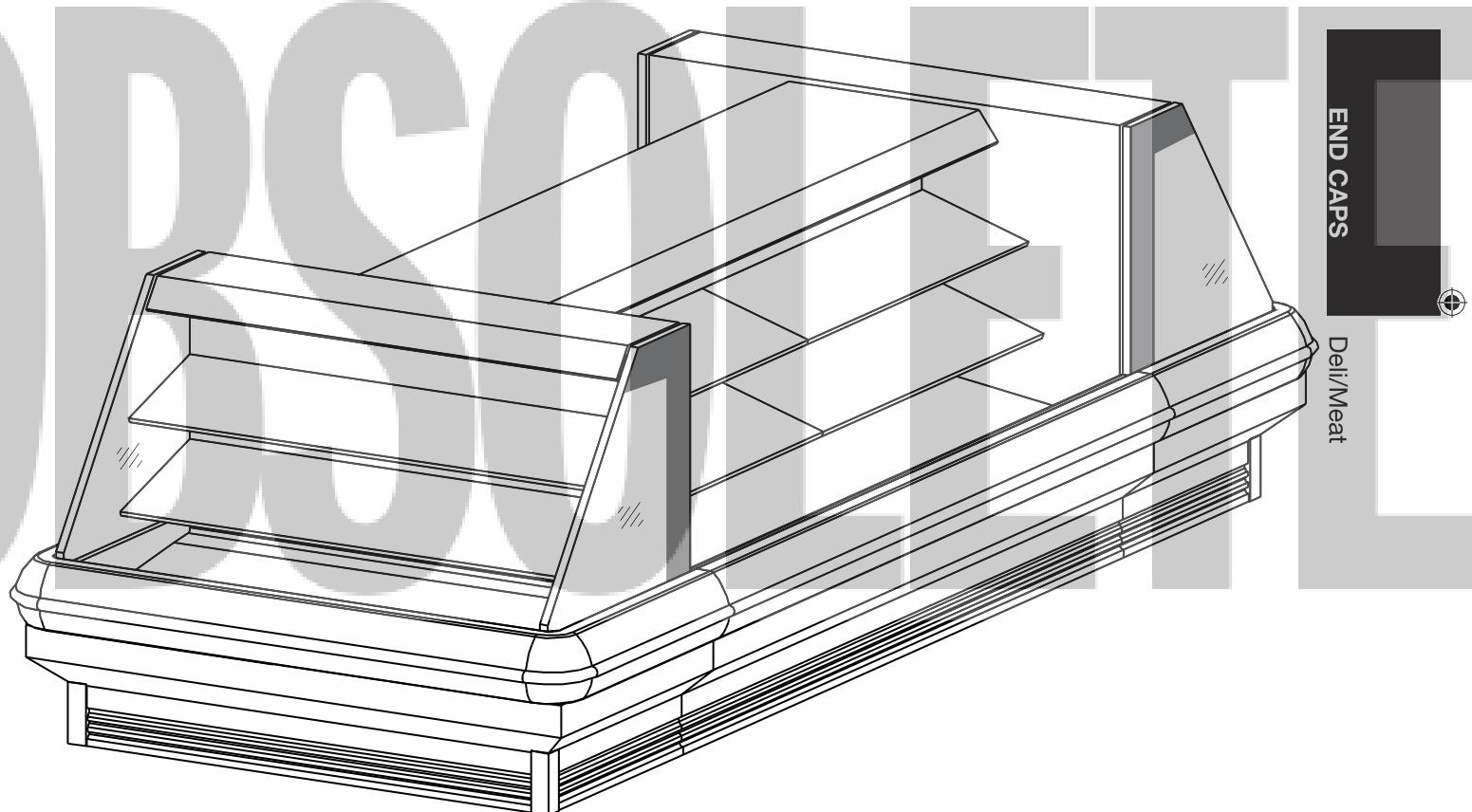
The ON3EMs shown below are unitized with
two ON3UM-8'cases with lighted rear sills,
standard fronts, and 14" & 16" shelves.



ON3EM
3D Model

HILL PHOENIX
EXCELENE
A DOVER COMPANY

The ON3EMs shown below are unitized with two ON3UM-8'cases with lighted rear sills, standard fronts, and 14" & 16" shelves.



Multi-Deck Deli/Meat End Cap Merchandiser

O3EM

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O3EM	2	1.00	60	0.23	14	1.89	227	2.31	480	2.66	640

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)					
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)			
			120 Volts		120 Volts			
			Amps	Watts	Amps	Watts		
O3EM	2	3'	0.37	44	0.14	16.6	0.30	35.8

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air ² Velocity (°F)
O3EM	6388	6-8	22	33	45	275

Defrost Controls

Model	Defrosts per Day	Electric Defrost			Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Run-Off Time (min)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3EM	4	6-8	40	47	45	45	---	3	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.13.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

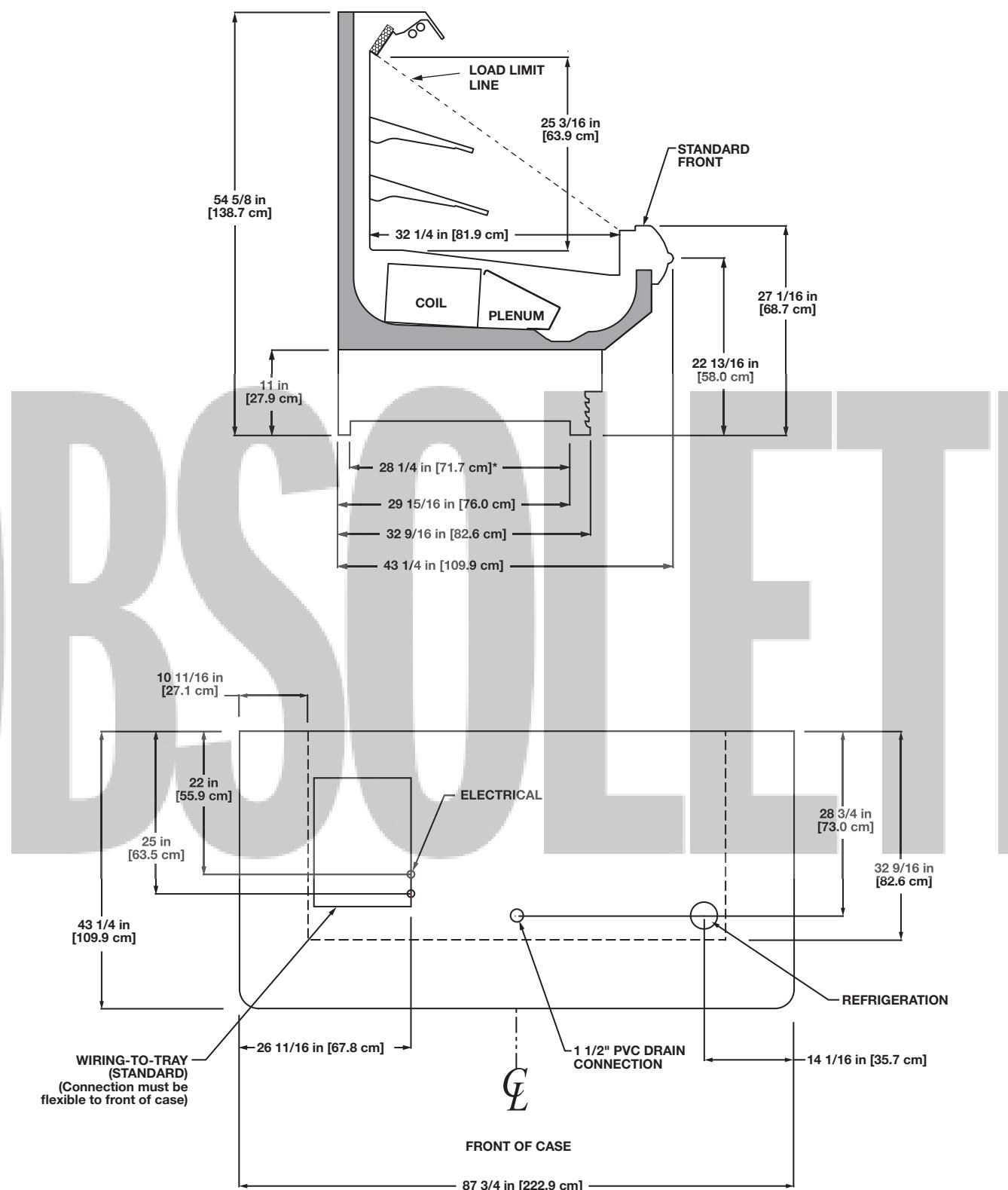
3 " - " indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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**NOTES:**

* STUB-UP AREA

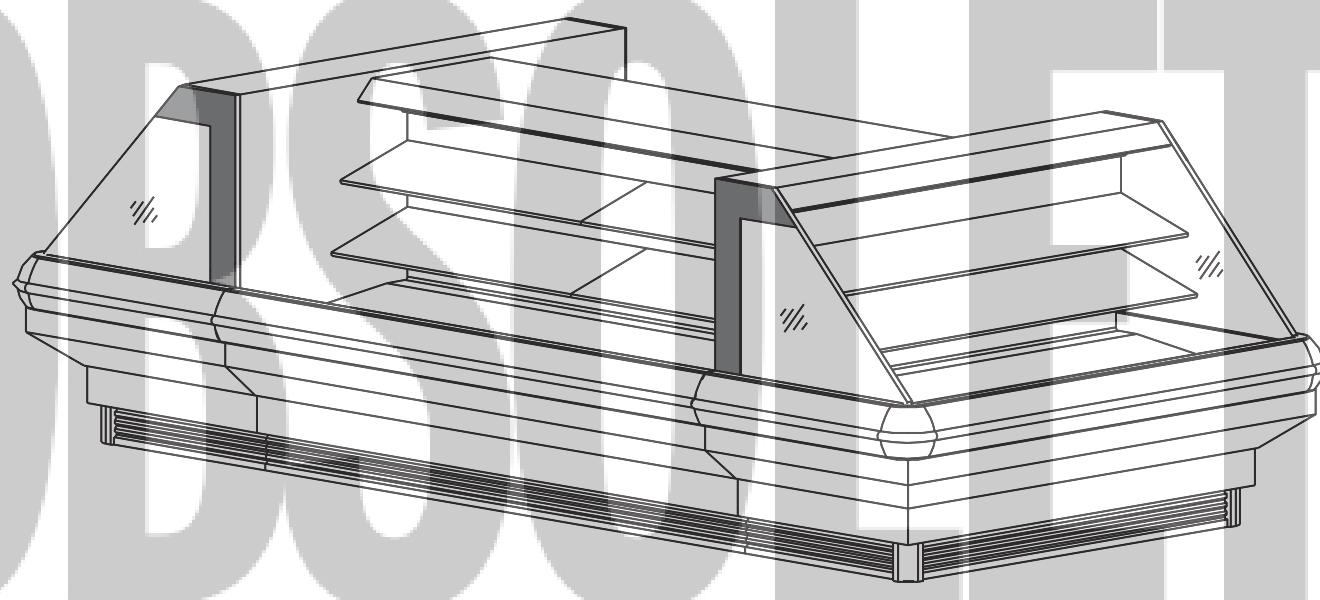
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



O3EM
3D Model

HILL PHOENIX®
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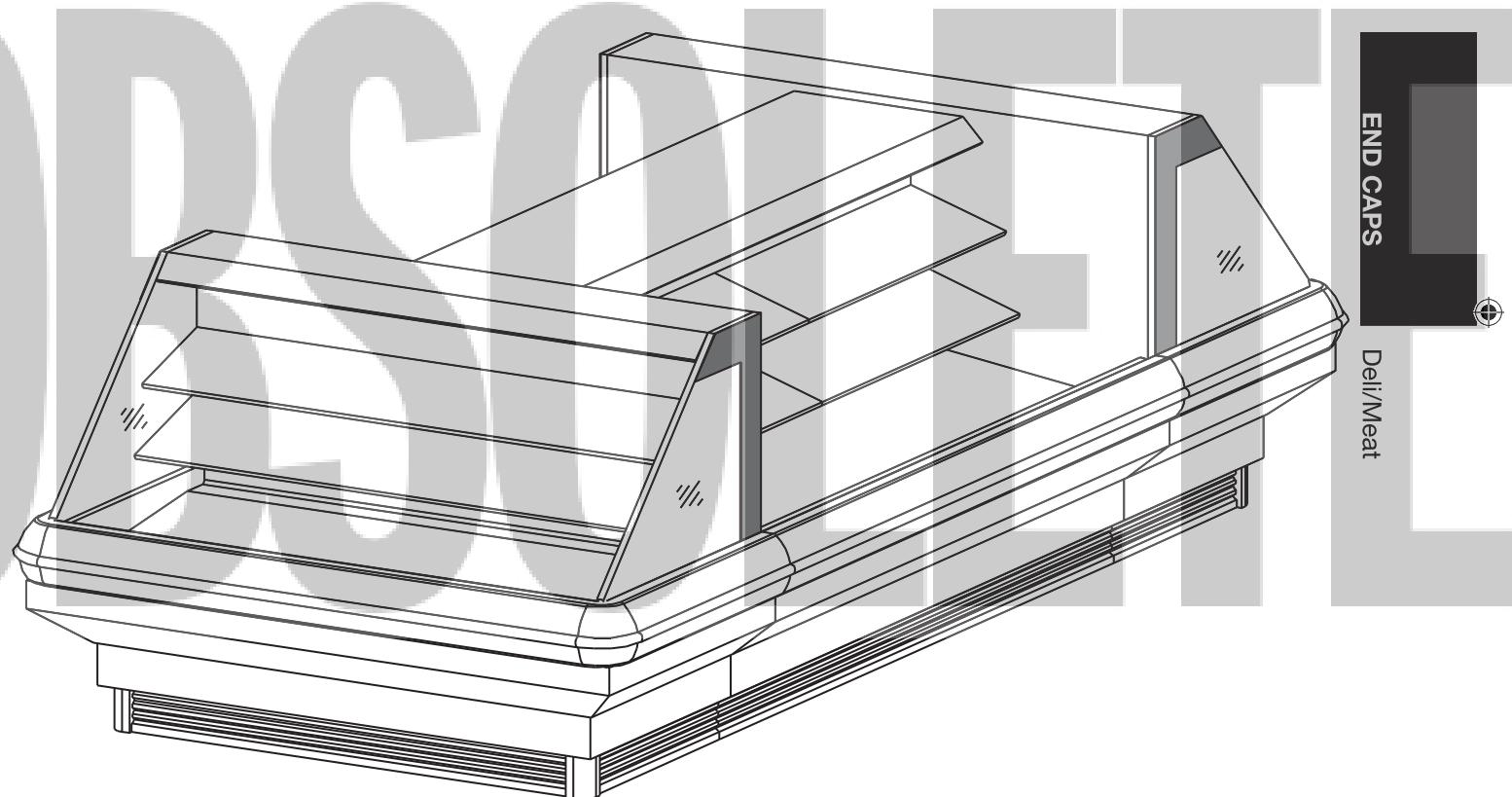
The O3EMs shown below are unitized with two O3UM-8'cases with lighted rear sills, standard fronts, and 14" & 16" shelves.



O3EM
3D Model

HILL PHOENIX®
EXCELENE
A DOVER COMPANY

The O3EMs shown below are unitized with two O3UM-8' cases with lighted rear sills, standard fronts, and 14" & 16" shelves.



Narrow Multi-Deck Deli/Meat End Cap Merchandiser

ON3.5EM

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ON3.5EM	2	1.00	60	0.23	14	1.89	227	2.31	480	2.66	640

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)			
			Standard Power (Cornice)		High Power (Cornice)			
			120 Volts		120 Volts		120 Volts	
ON3.5EM	1	5'	0.28	34	0.12	14.3	0.27	32.1

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air ² Velocity (°F)
ON3.5EM	6388	6-8	22	33	45	275

Defrost Controls

Model	Defrosts per Day	Electric Defrost			Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Run-Off Time (min)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON3.5EM	4	6-8	40	47	45	45	---	3	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.13.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

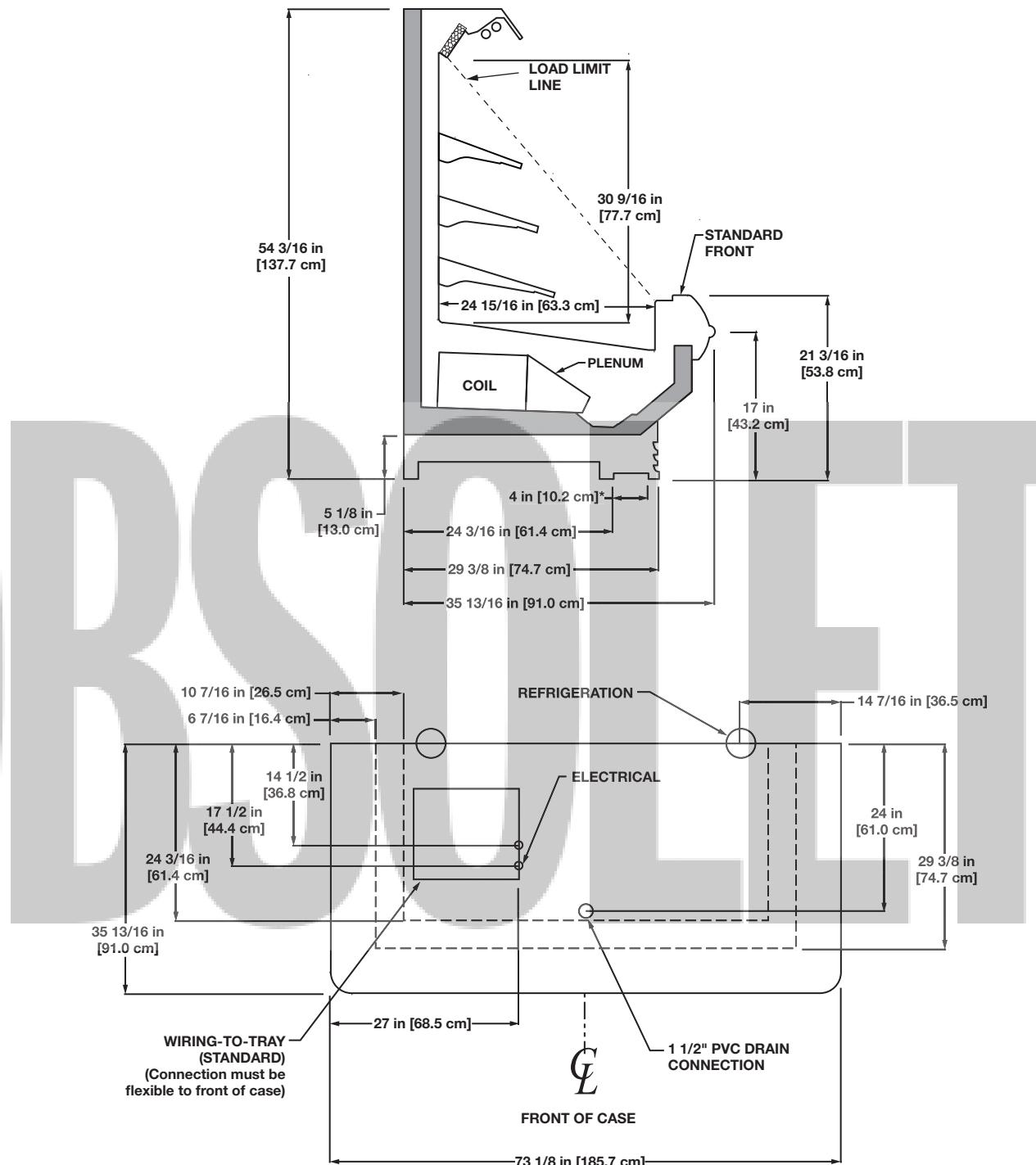
3 " - " indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.

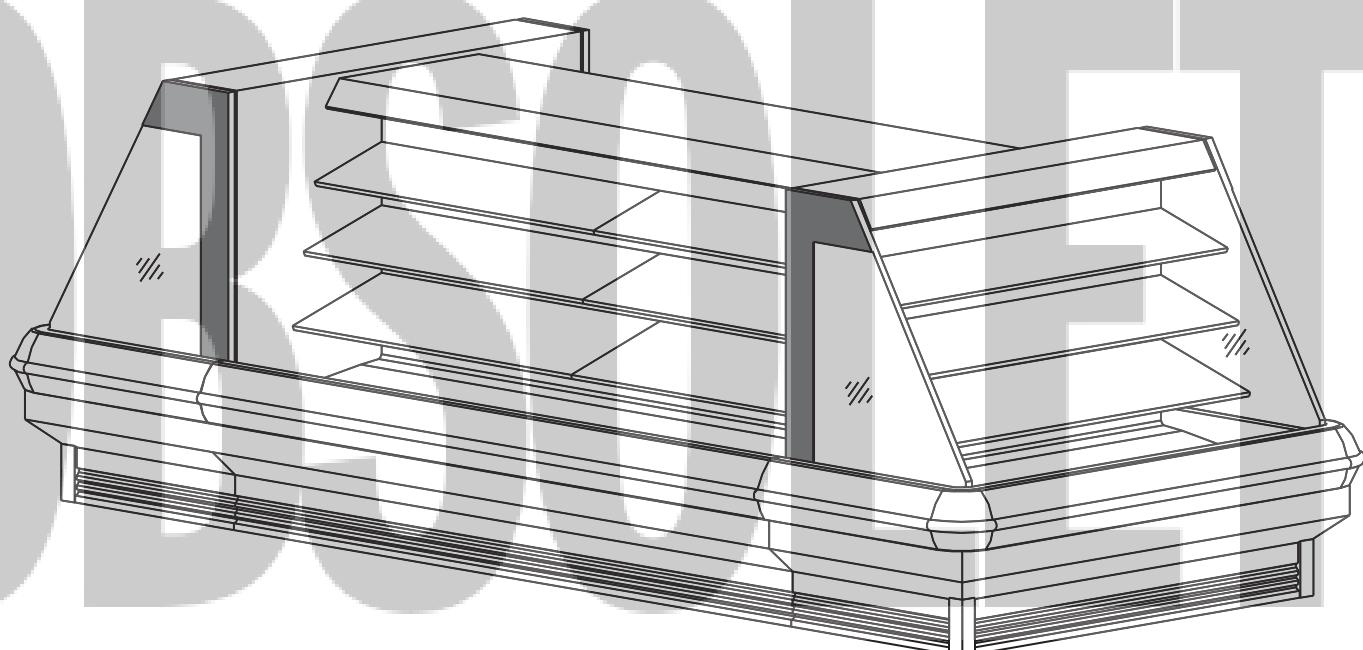


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ON3.5EM
3D Model

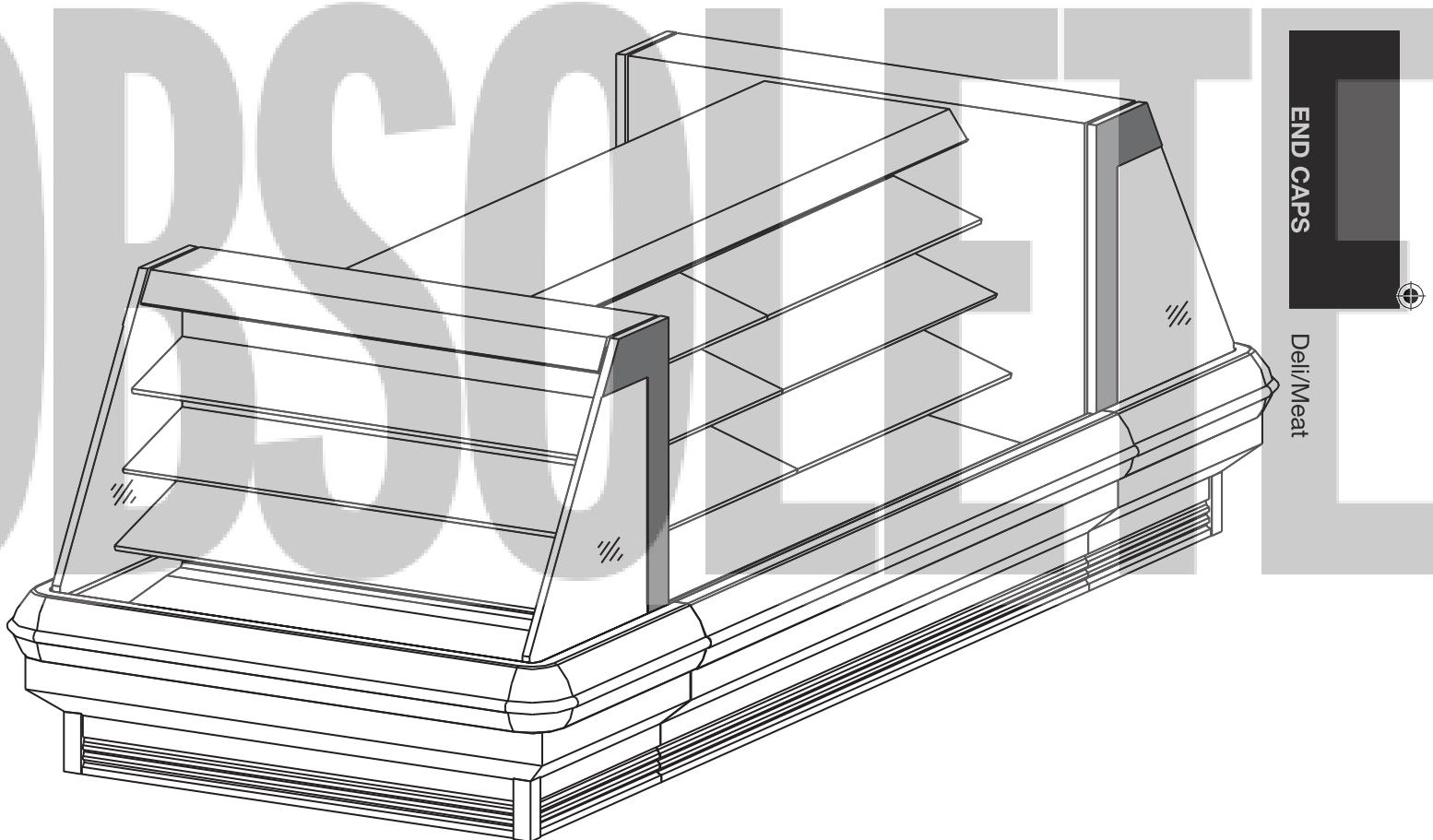
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A DOVER COMPANY



ON3.5EM
3D Model

HILL PHOENIX
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The ON3.5EMs shown below are unitized with two ON3.5UM-8' cases with lighted rear sills, standard fronts, and 12, 14" & 16" shelves.



Multi-Deck Deli/Meat End Cap Merchandiser

O3.5EM

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O3.5EM	2	1.00	60	0.39	23.4	1.89	227	2.31	480	2.66	640

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)					
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)			
			120 Volts		120 Volts			
			Amps	Watts	Amps	Watts		
O3.5EM	1	5'	0.37	44	0.14	16.6	0.30	35.8

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air ² Velocity (°F)
O3.5EM	8037	6-8	22	33	45	275

Defrost Controls

Model	Defrosts per Day	Electric Defrost			Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Run-Off Time (min)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3.5EM	4	6-8	40	47	45	45	---	---	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.13.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

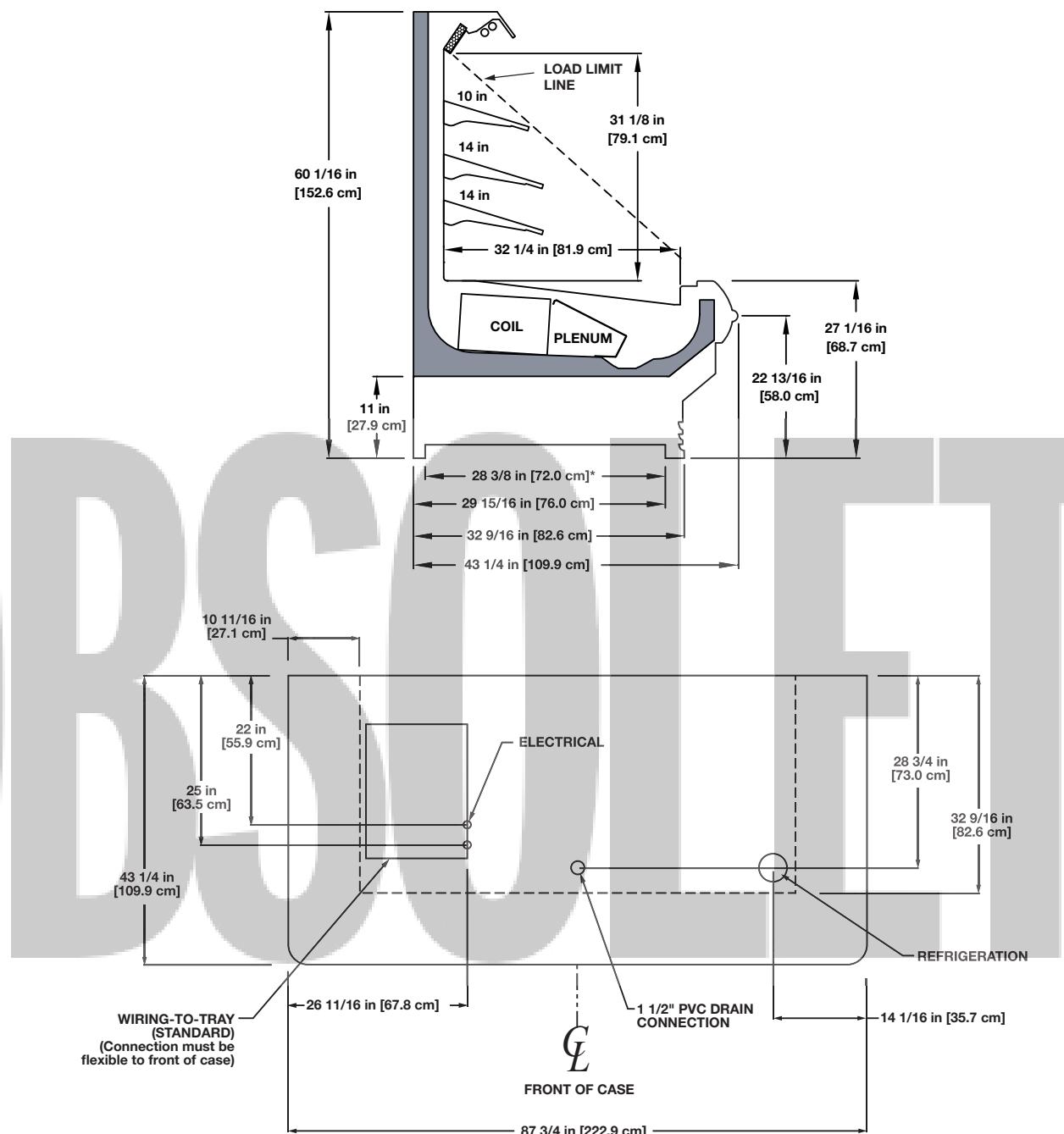
3 " --- " indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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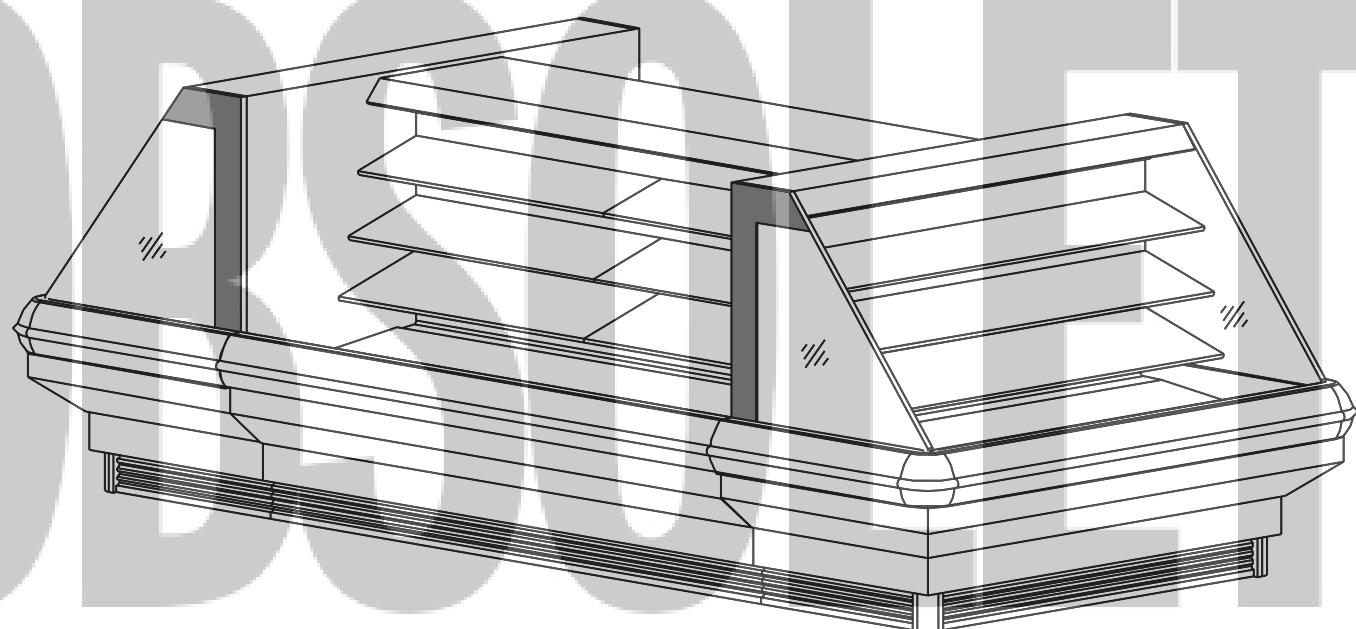


END CAPS
Deli/Meat



O3.5EM
3D Model

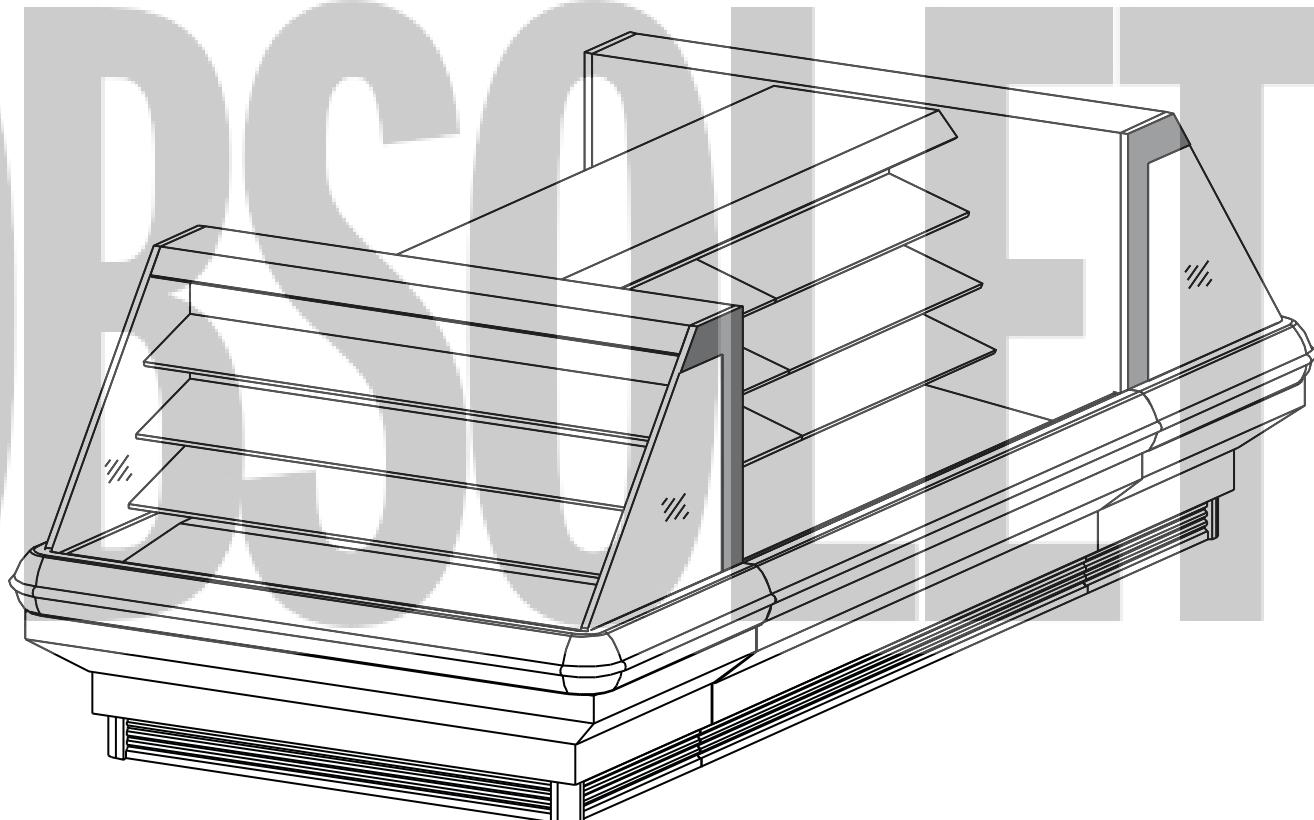
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O3.5EM
3D Model

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The O3.5EMs shown below are unitized with
two O3.5UM-8'cases with lighted rear sills,
standard fronts, and 12", 14" & 16" shelves.



Narrow Multi-Deck Deli End Cap Merchandiser

ON4EM

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ON4EM	2	1.00	60	0.23	14	0.99	119	2.31	480	2.66	640

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)			
			Standard Power (Cornice)		High Power (Cornice)			
			120 Volts		120 Volts		120 Volts	
ON4EM	1	5'	0.28	34	0.12	14.3	0.27	32.1

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air ² Velocity (°F)
ON4EM	5988	6-8	22	30	40	280

Defrost Controls

Model	Defrosts per Day	Electric Defrost			Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Run-Off Time (min)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON4EM	6	6-8	40	47	45	47	---	3	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.20.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

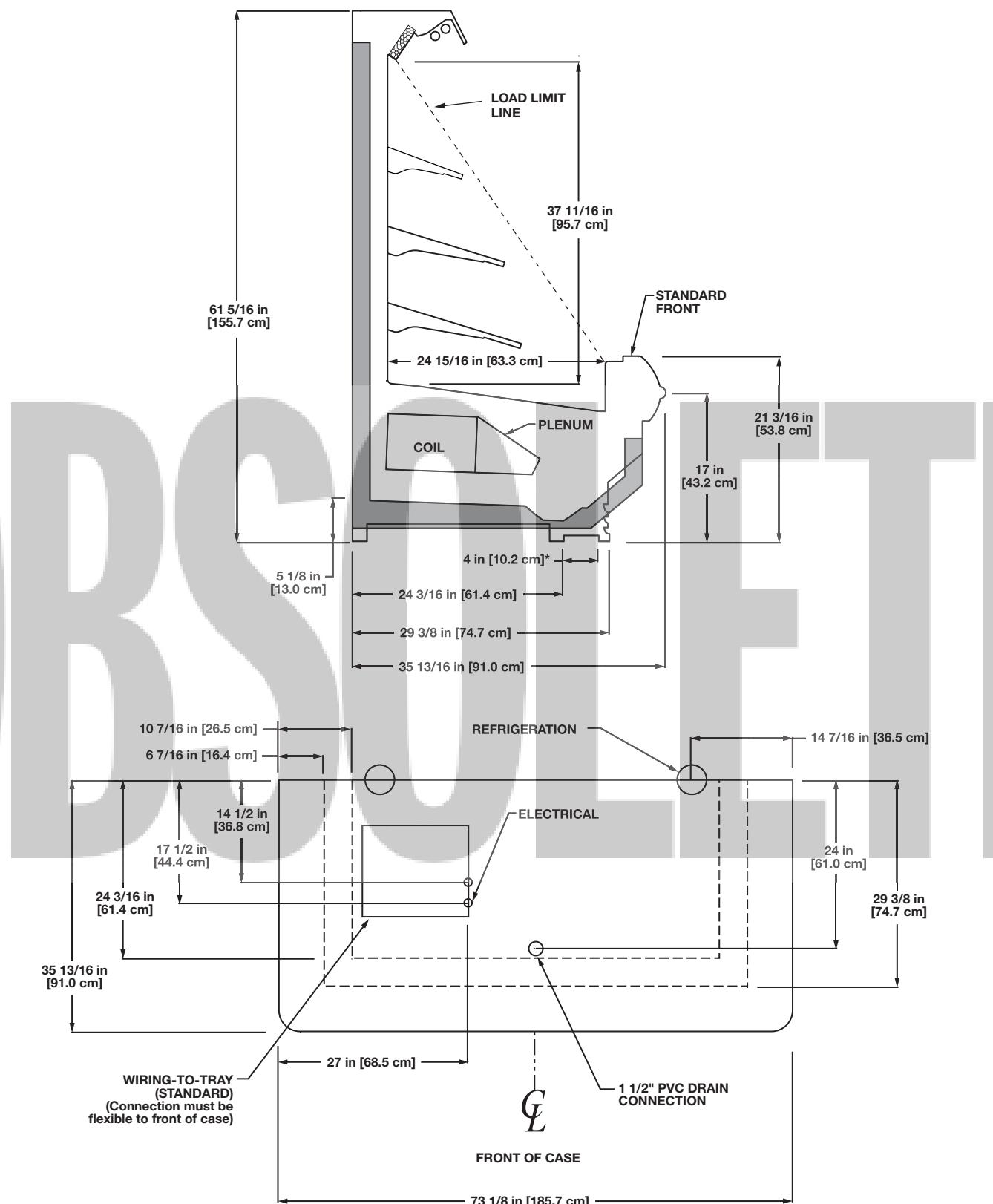
3 “---” indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



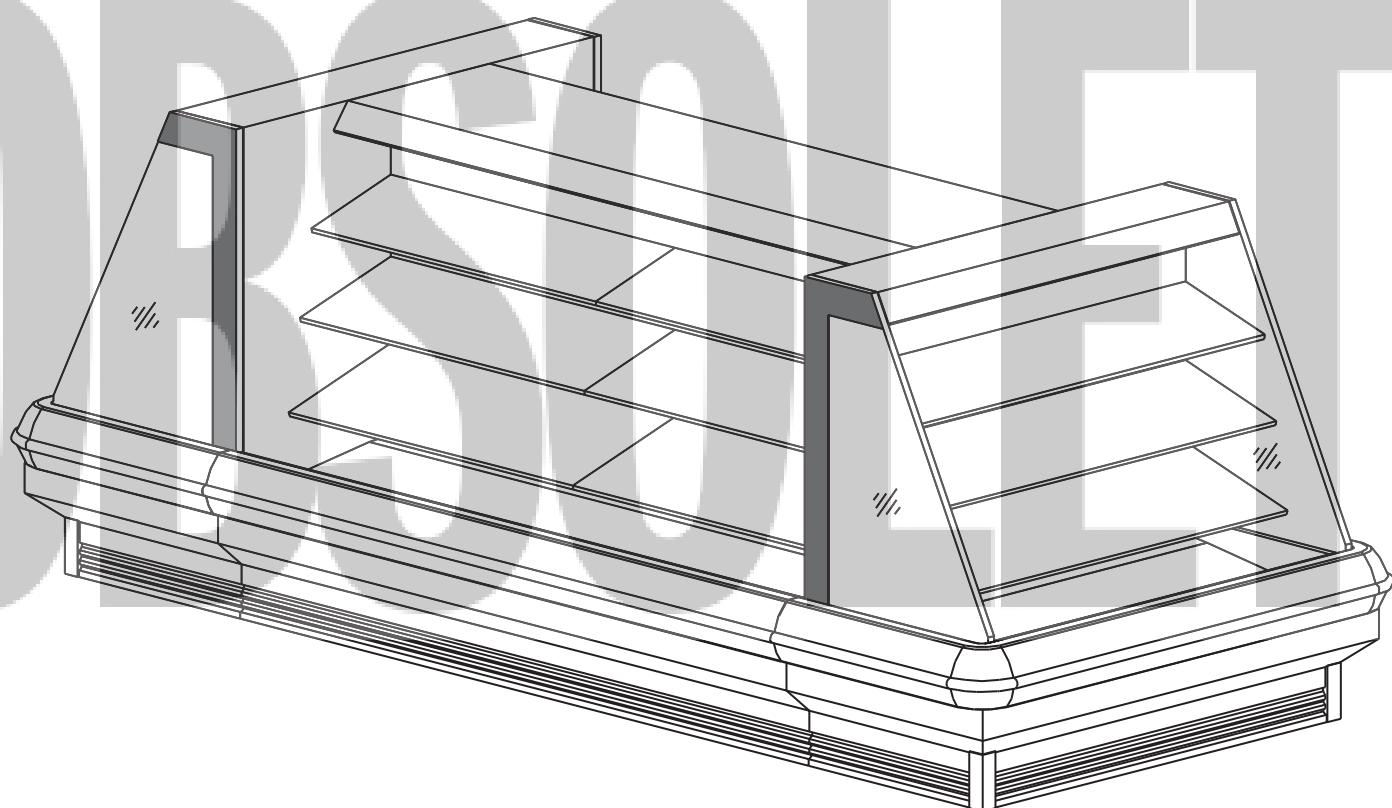
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EXCELLLENCE
A DOVER COMPANY



ON4EM
3D MODEL

HILL PHOENIX®
EXCELLENCE
A DOVER COMPANY

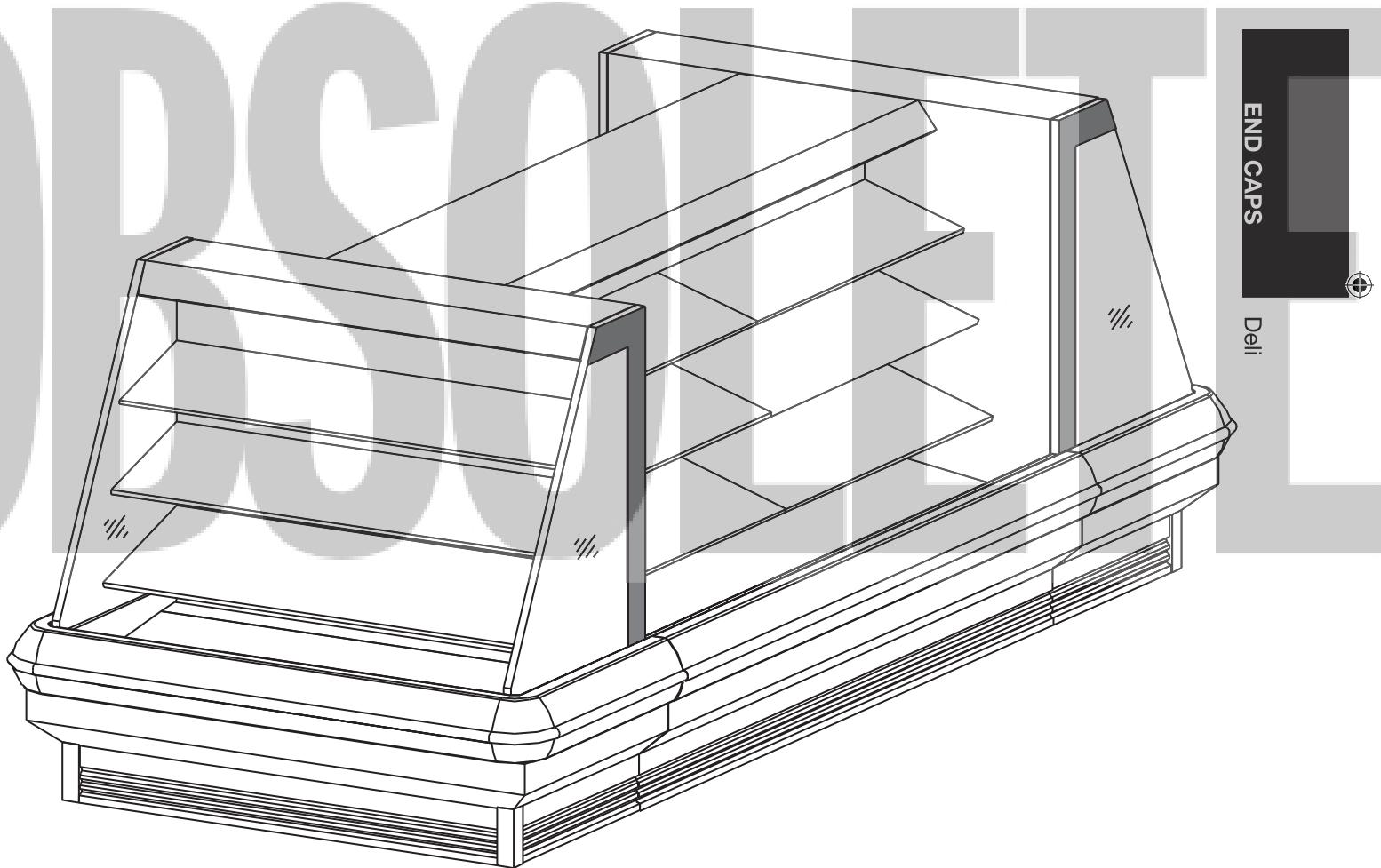
The ON4EMs shown below are unitized with two ON4UM-8' cases with lighted rear sills, standard fronts, and 14", 16" & 18" shelves.



ON4EM
3D MODEL

HILL PHOENIX
EXCELENE
A DOVER COMPANY

The ON4EMs shown below are unitized with two ON4UM-8' cases with lighted rear sills, standard fronts, and 14", 16" & 18" shelves.



Narrow Multi-Deck Deli End Cap Merchandiser

ON5EM

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ON5EM	2	1.00	60	0.23	14	1.89	227	2.31	480	2.66	640

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)			
			Standard Power (Cornice)		High Power (Cornice)			
			120 Volts		120 Volts		120 Volts	
ON5EM	1	5'	0.28	34	0.12	14.3	0.27	32.1

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air ² Velocity (°F)
ON5EM	6258	6-8	22	30	40	300

Defrost Controls

Model	Defrosts per Day	Electric Defrost			Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Run-Off Time (min)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON5EM	6	6-8	40	47	45	47	---	3	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.20.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

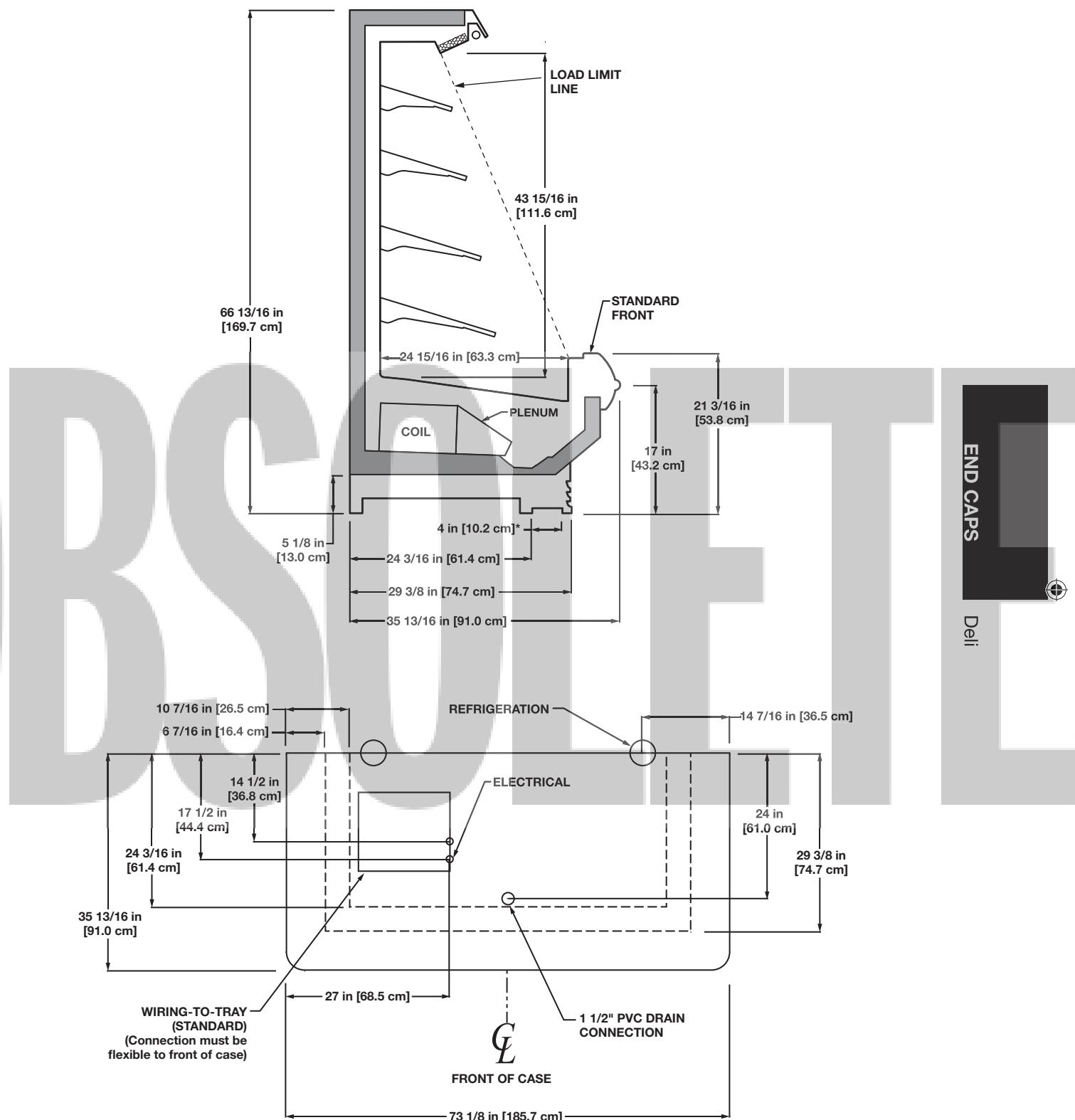
3 " - " indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



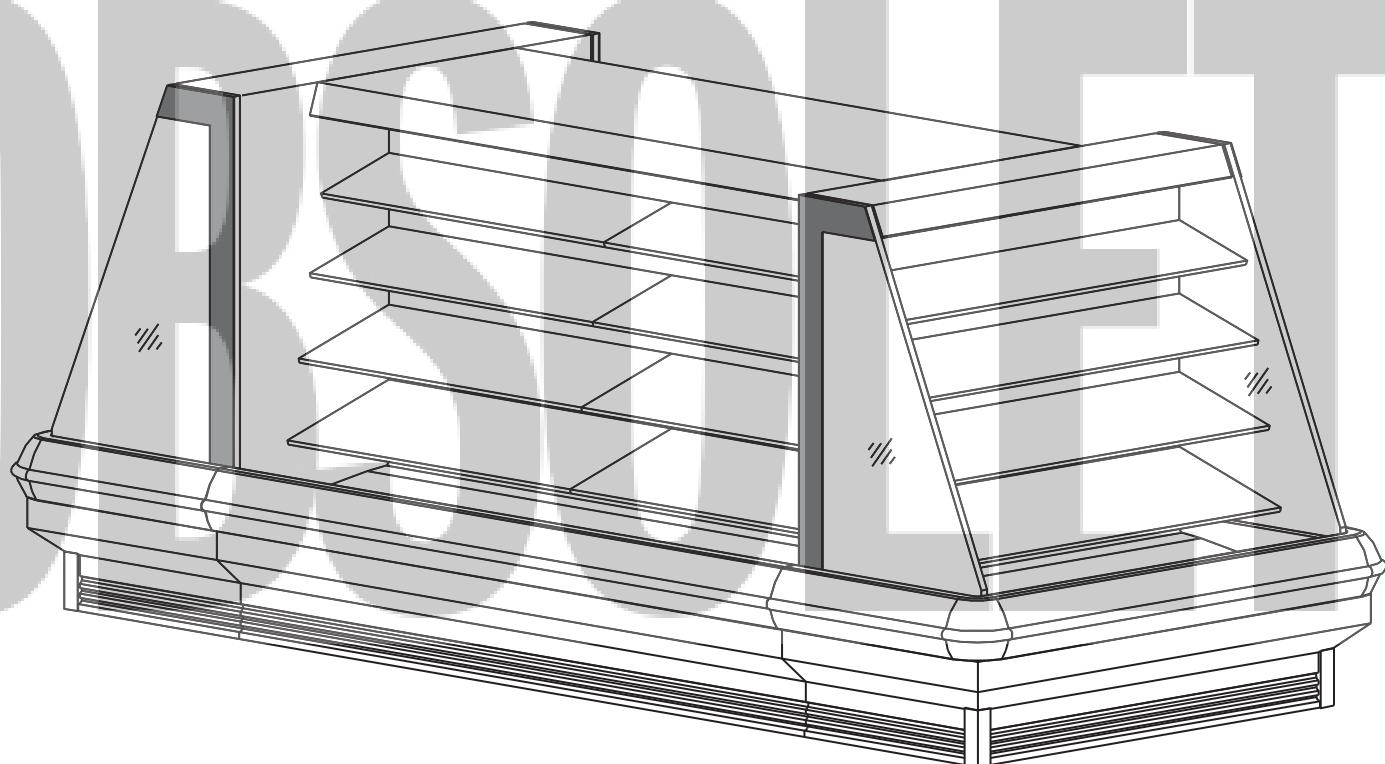
HILL PHOENIX
EXCELLLENCE
A DOVER COMPANY



ON5EM
3D Model

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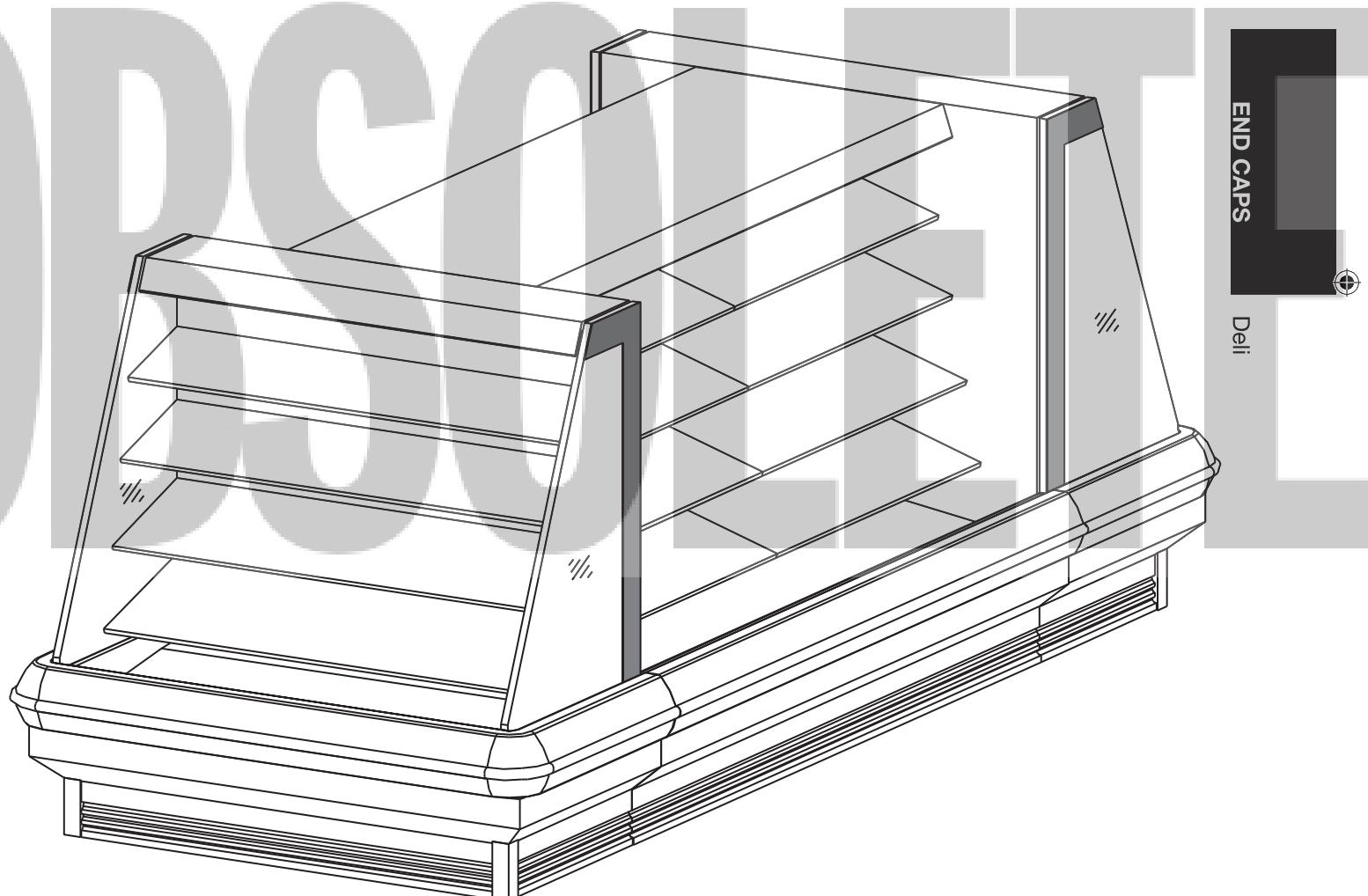
The ON5EMs shown below are unitized with two ON5UM-8' cases with lighted rear sills, standard fronts, and 12, 14" & 16" shelves.



ON5EM
3D Model

HILL PHOENIX
EXCELENE
A DOVER COMPANY

The ON5EMs shown below are unitized with two ON5UM-8' cases with lighted rear sills, standard fronts, and 12, 14" & 16" shelves.



Single Deck Bulk Produce End Cap Merchandiser

OEP

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OEP	2	1.00	60	0.23	14	---	---	2.88	600	3.33	798

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)			
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)	
			120 Volts		120 Volts	
			Amps	Watts	Amps	Watts
OEP	---	---	---	---	---	---

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air Velocity (°F)
OEP Bulk Produce	2052	6-8	29	NA ³	47	NA

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OEP	2	6-8	40	47	45	47	---	---	---	---

1 "---" indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.06.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

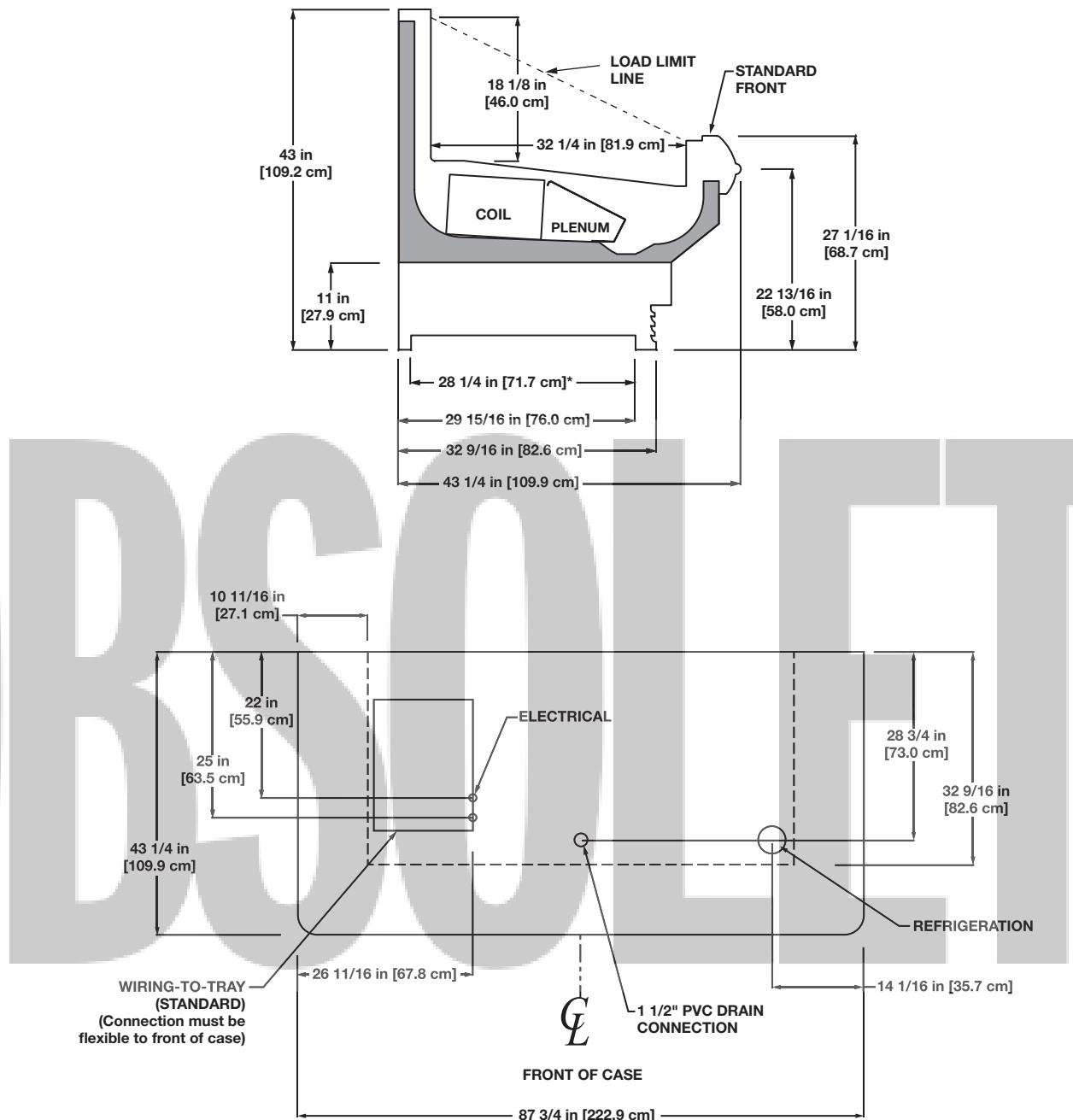
3 "NA" indicates not applicable on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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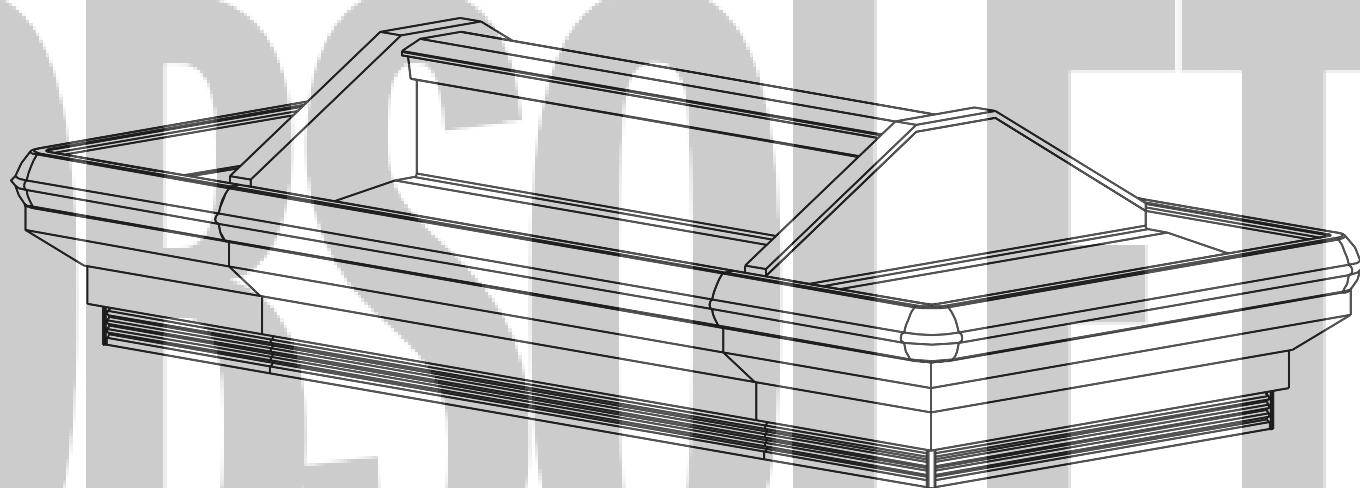
END CAPS
Bulk Produce



OEP
3D Model

HILL PHOENIX®
EXCELLENCE
A DOVER COMPANY

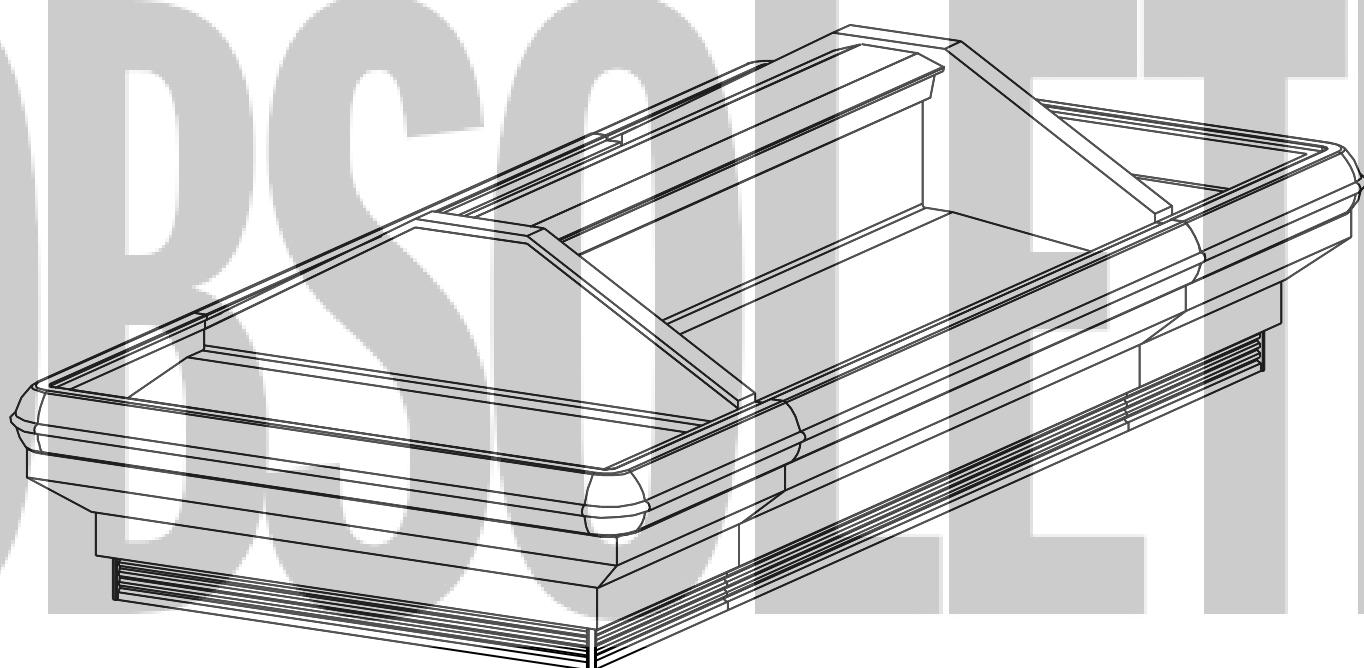
The OEPs shown below are unitized with
two OP-8'cases with 43" rear sills and
standard fronts.



OEP
3D Model

HILL PHOENIX®
EXCELENE
A DOVER COMPANY

The OEPs shown below are unitized with
two OP-8'cases with 43" rear sills and
standard fronts.



Narrow Multi-Deck Bulk Produce End Cap Merchandiser

ON3EP

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ON3EP	2	1.00	60	0.15	9.2	---	1	---	2.31	480	2.66	640

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)			
			Standard Power (Cornice)		High Power (Cornice)			
			120 Volts		120 Volts		120 Volts	
			Amps	Watts	Amps	Watts	Amps	Watts
ON3EP	---	---	---	---	---	---	---	---

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air Velocity (°F)
ON3EP Bulk Produce	3908	6-8	29	NA ³	46	NA

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON3EP	2	6-8	40	49	60	47	26	45	---	---

1 " --- " indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.06.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

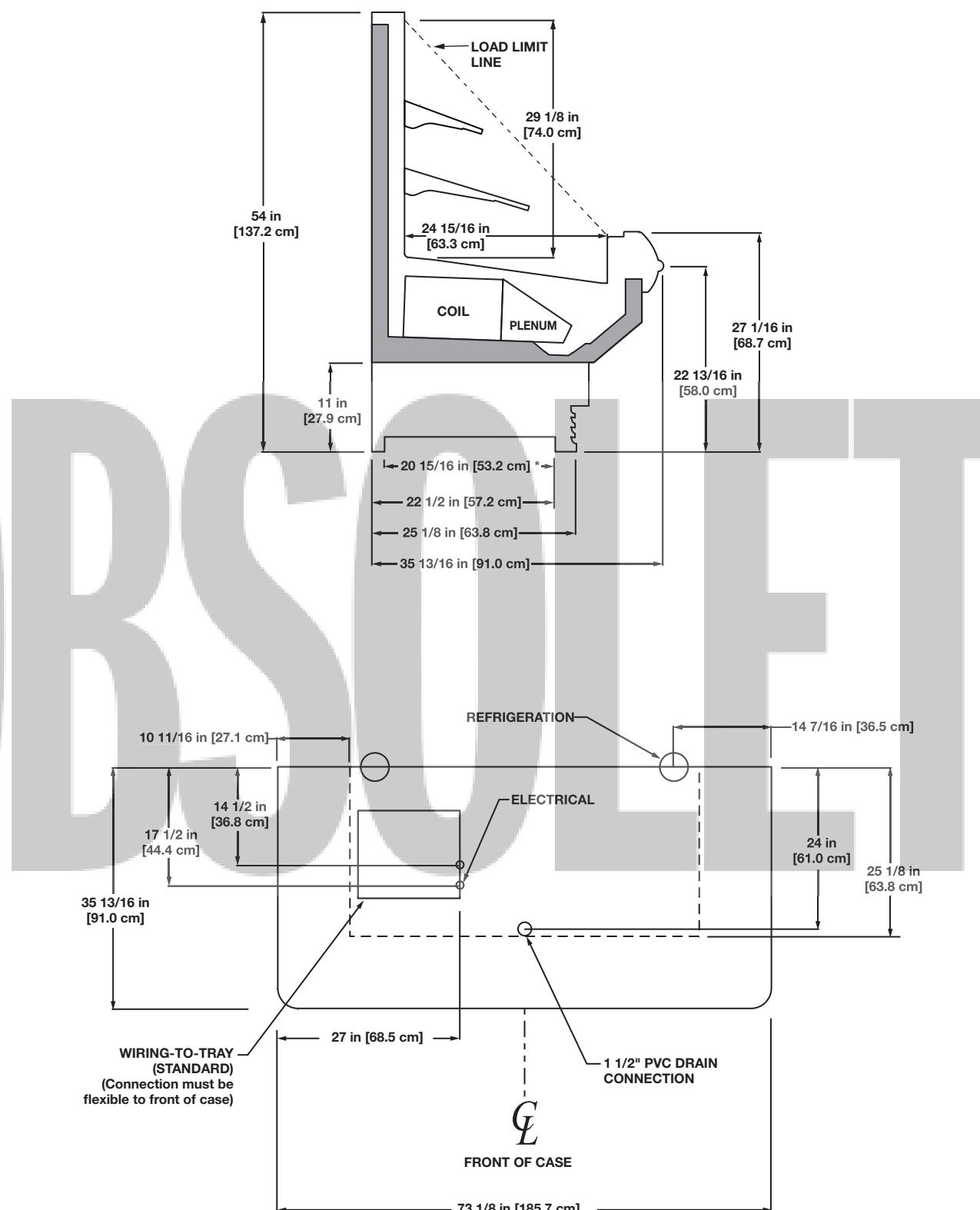
3 "NA" indicates not applicable on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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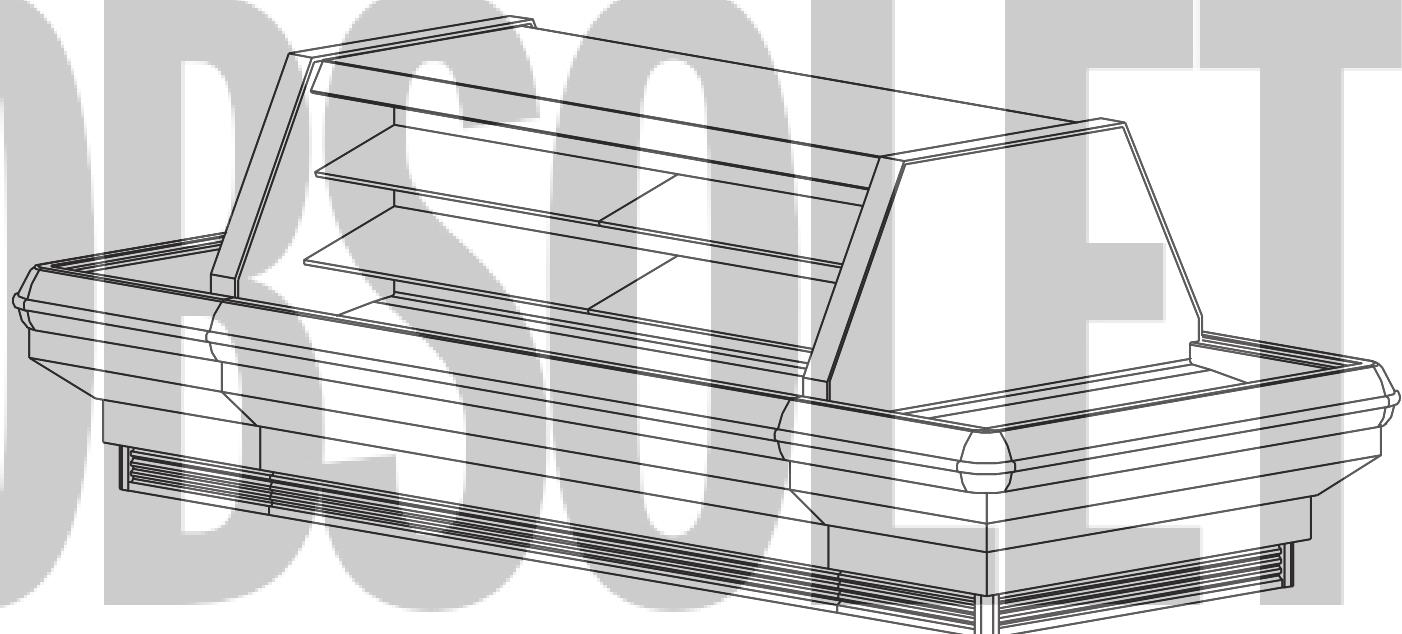
END CAPS
Bulk Produce



ON3EP
3D Model

HILL PHOENIX®
EXCELLENCE
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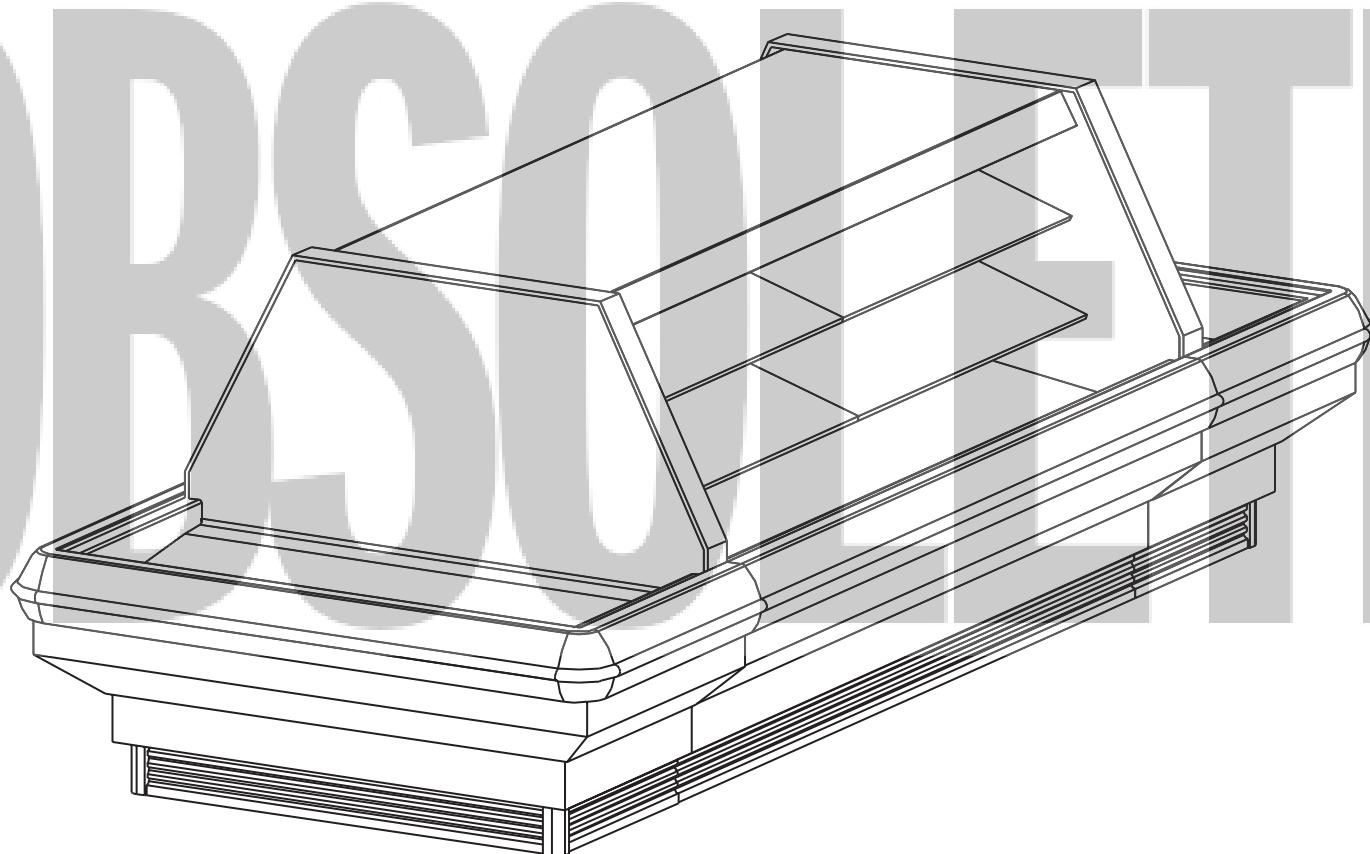
The ON3EPs shown below are unitized with two ON3UM-8' cases with 16" lighted rear sills, standard fronts, and 14" & 16" shelves.



ON3EP
3D Model

HILL PHOENIX
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The ON3EPs shown below are unitized with two ON3UM-8' cases with 16" lighted rear sills, standard fronts, and 14" & 16" shelves.



END CAPS

Bulk Produce



Multi-Deck Bulk Produce End Cap Merchandiser

O3EP

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O3EP	2	1.00	60	0.15	9.2	---	---	2.88	600	3.33	798

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)			
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)	
			120 Volts		120 Volts	
			Amps	Watts	Amps	Watts
O3EP	---	---	---	---	---	---

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)		Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air Velocity (°F)
		Set Point	Max				
O3EP Bulk Produce	2405	6-8	29	NA ³	47	NA	

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3EP	2	6-8	40	49	60	47	26	45	---	---

1 "---" indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.06.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

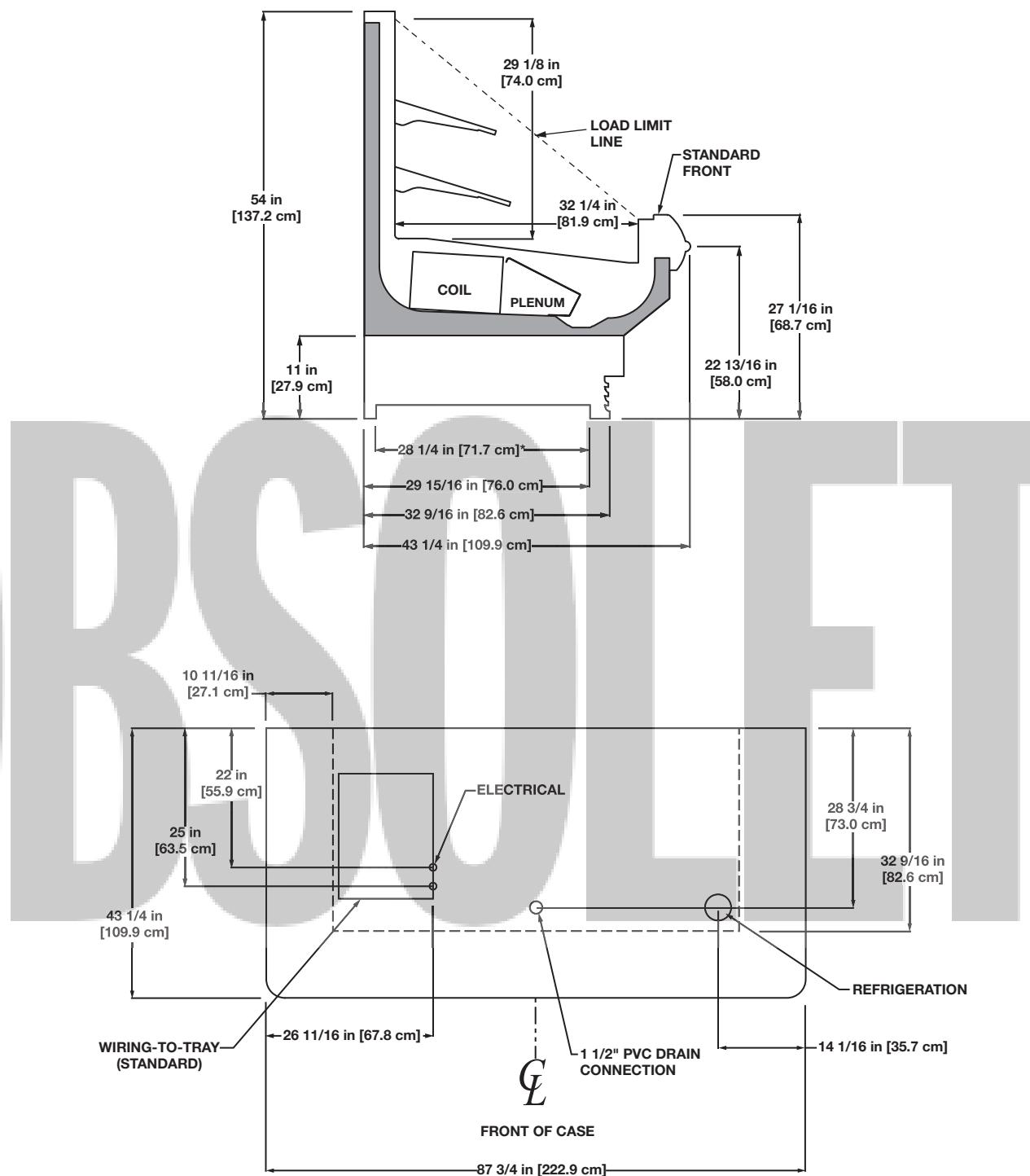
3 "NA" indicates not applicable on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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END CAPS
Bulk Produce



NOTES:

* STUB-UP AREA

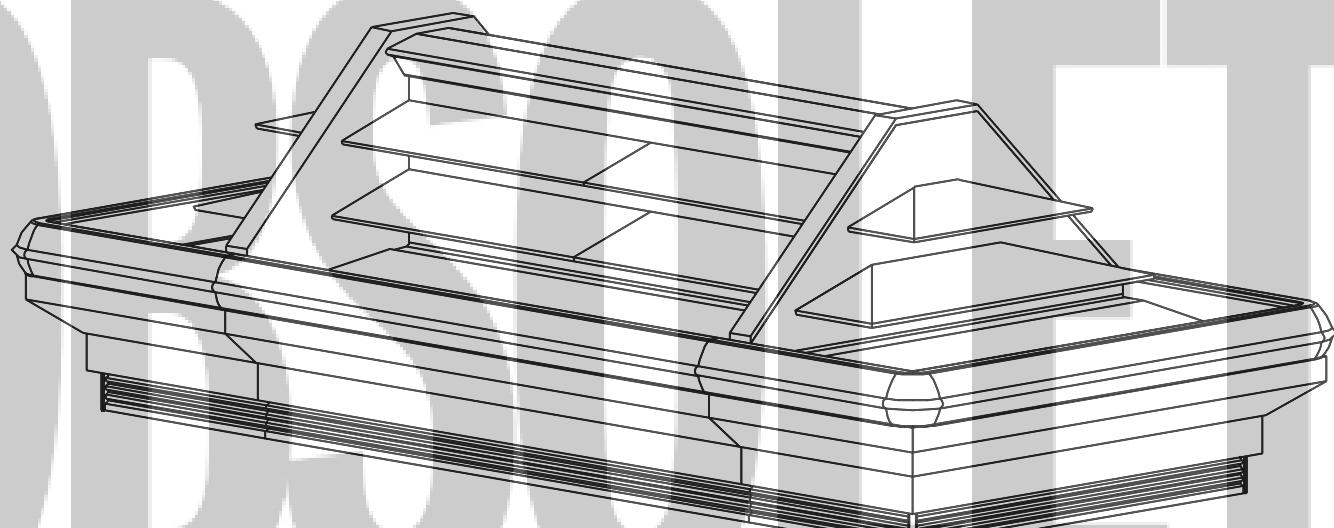
• SUCTION LINE - 7/8", LIQUID LINE - 3/8"

• DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

O3EP
3D Model

HILL PHOENIX®
E X C E L L E N C E®
A DOVER COMPANY

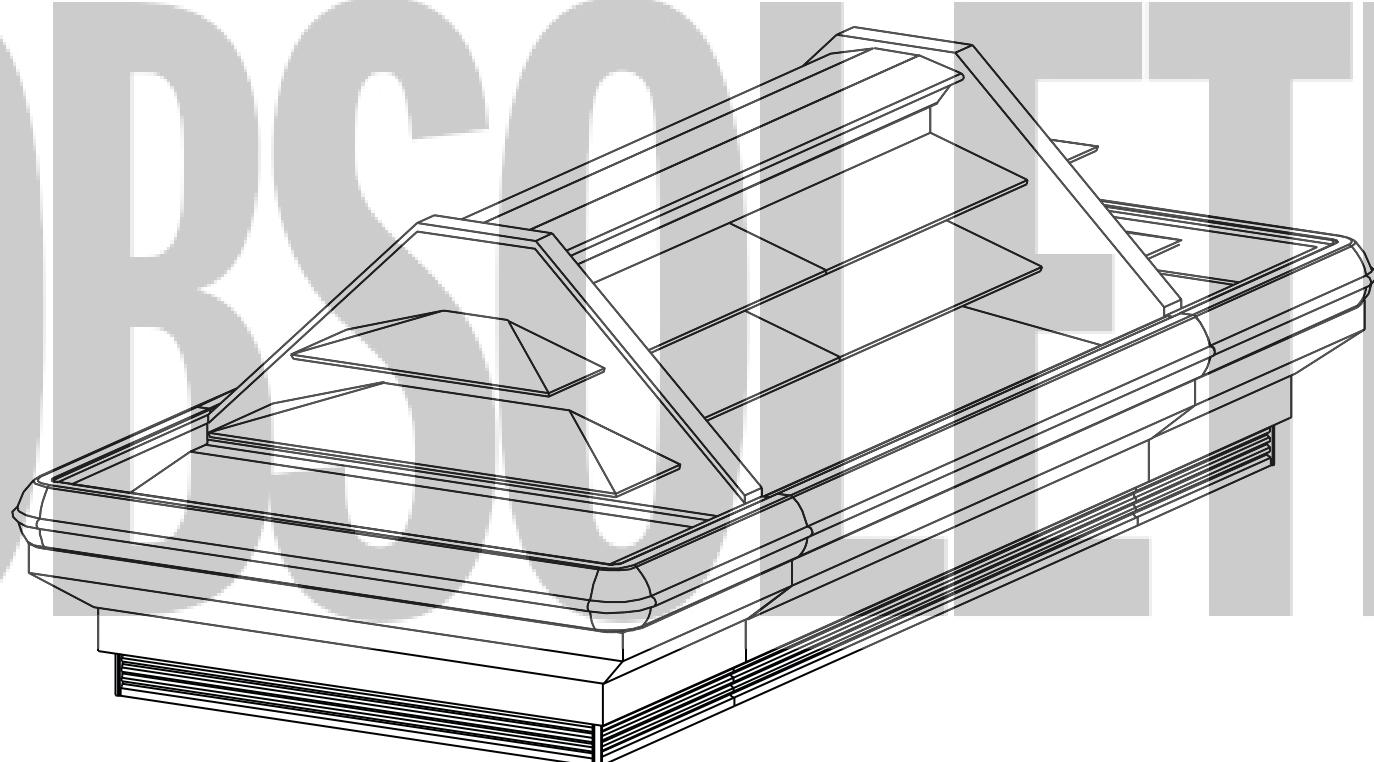
The O3EPs shown below are unitized with
two O3UM-8'cases with standard rear sills,
standard fronts, and 14" & 16" shelves.



O3EP
3D Model

HILL PHOENIX®
EXCELLENCE
A DOVER COMPANY

The O3EPs shown below are unitized with
two O3UM-8'cases with standard rear sills,
standard fronts, and 14" & 16" shelves.



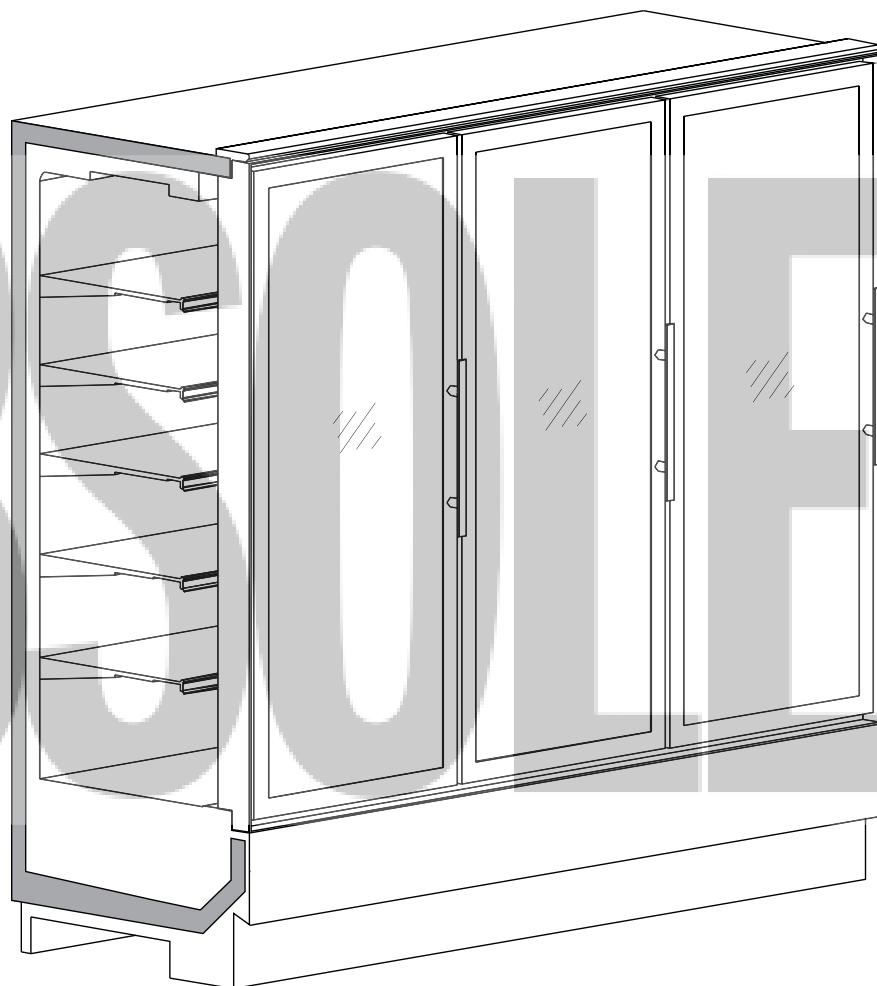
END CAPS

Bulk Produce



OBSOLETE

REACH-IN



NOTES

- Cases shown with an ANSI/NSF* mark are listed by NSF.
- Cases shown with a UL* mark are listed by Underwriters Laboratories Inc.
- Allow for an extra 1/8" per joint when lining up merchandisers.
- Technical information contained herein is subject to change without notice.

* ANSI - American National Standard Institute
NSF - National Sanitation Foundation
UL - Underwriters Laboratories Inc

Narrow Reach-In Beverage Merchandiser

ONRB - 2, 3, 4, 5 & 6-door

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters				
		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ONRB	2-door	2	1.00	60	0.31	18	4.39	914	5.06	1215
	3-door	3	1.50	90	0.46	28	4.96	1032	5.71	1370
	4-door	4	2.00	120	0.61	37	6.51	1355	7.55	1813
	5-door	5	2.50	150	0.77	46	7.96	1655	9.17	2201
	6-door	6	3.00	180	0.92	55	9.40	1955	10.79	2589

Lighting Data

Model		Fluorescent		Optimax 2 ¹ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ¹ LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ONRB	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154			
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145			
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139			
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135			
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133			

Anti-Condensate Heater Data

Model		Anthony						Gemtron Tundra (NT)	
		101		Eliminator ²		Eliminator 2 ²			
		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONRB	2-door	1.02	122	0.75	90	0.75	90	0.97	116
	3-door	1.50	180	1.11	133	1.11	133	1.43	172
	4-door	1.97	236	1.44	173	1.44	173	1.93	231
	5-door	2.41	289	1.75	210	1.75	210	2.40	288
	6-door	2.93	351	2.14	257	2.14	257	3.60	432

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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Narrow Reach-In Beverage Merchandiser

ONRB - 2, 3, 4, 5 & 6-door

Guidelines & Control Settings

Model ³	⁴ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁵ Air Velocity (FPM)
ONRB Deli/Dairy	734	32	6-8	36	38	460
ONRB Beverage	704	34	6-8	39	40	460

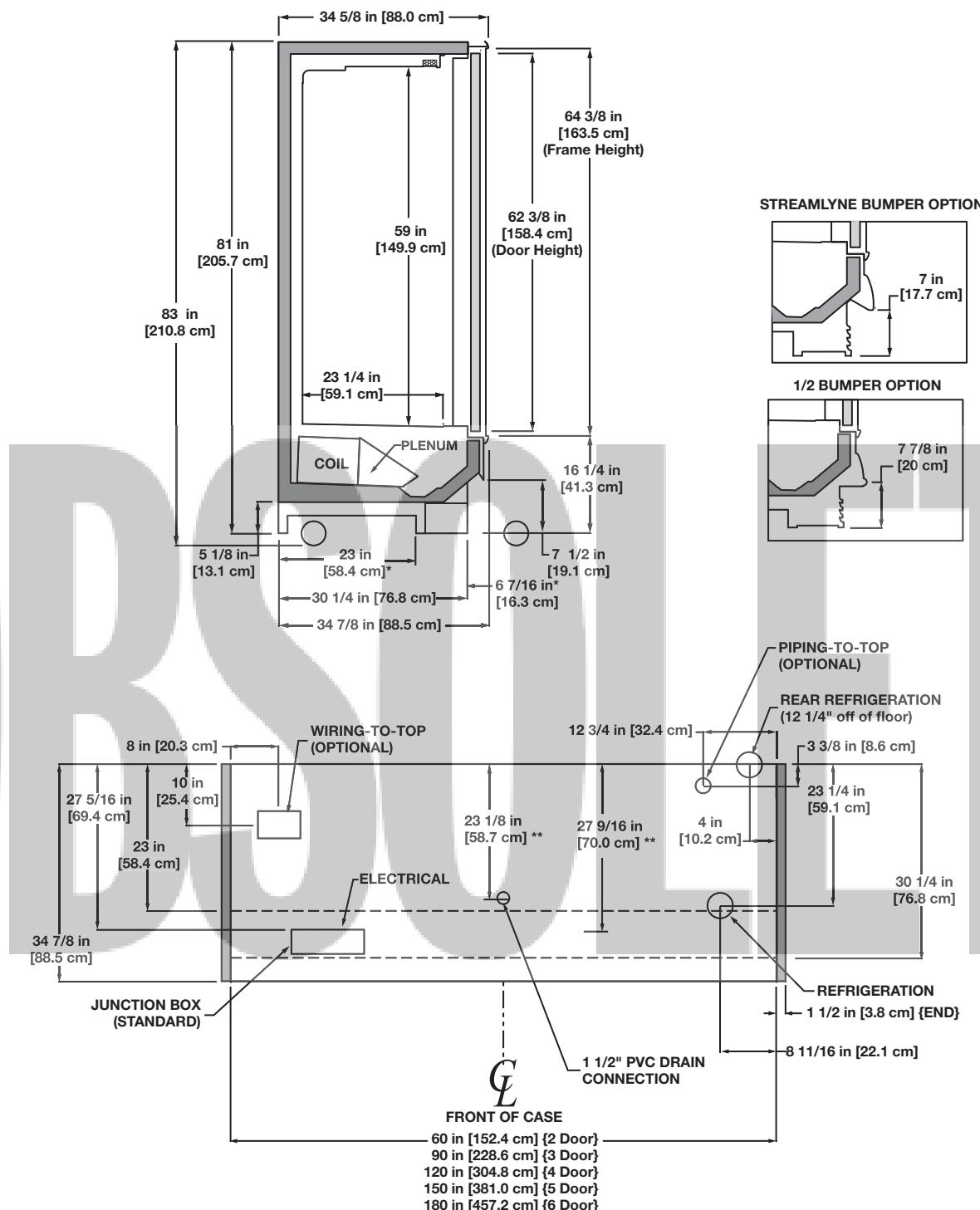
Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONRB	4 ⁶	6-8	30	47	30	40	24	47	---	---

- 1 Low-power lights. High-power option available.
- 2 Eliminator values given for doors with no heat on the glass.
- 3 All data listed is for an ONRB configured with 20" shelves.
- 4 BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- 5 Average discharge air velocity at peak of defrost.
- 6 If timed-off defrost is utilized. If electric or hot gas defrost is utilized, case only requires 1 defrost per day.
- 7 “---” indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP- ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (ALL LENGTHS) 1/2"
- LIQUID LINE (ALL LENGTHS) - 3/8", LIQUID LINE w/ HOT GAS DEFROST (ALL LENGTHS) - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20" & 22"; SOLID SHELVES 18", 20" & 22"
- TOP SHELF MUST BE 20" OR SHORTER
- RECOMMENDED CONFIGURATION IS 20" SHELF AND 4 22" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

High Narrow Reach-In Beverage Merchandiser

ONRBH - 2, 3, 4 & 5-door

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters				
		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ONRBH	2-door	2	1.00	60	0.31	118	4.39	914	5.06	1215
	3-door	3	1.50	90	0.46	28	4.96	1032	5.71	1370
	4-door	4	2.00	120	0.61	37	6.51	1355	7.55	1813
	5-door	5	2.50	150	0.77	46	7.96	1655	9.17	2201

Lighting Data

Model		Fluorescent		Optimax 2 ¹ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ¹ LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ONRBH	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154			
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145			
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139			
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135			

Anti-Condensate Heater Data

Model		Anthony						Gemtron Tundra (NT)	
		101		Eliminator ²		Eliminator 2 ²			
		120 Volts		120 Volts		120 Volts			
ONRBH		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
		1.06	127	0.78	94	0.78	94	1.00	121
		1.54	185	1.13	136	1.13	136	1.49	179
		2.06	247	1.51	181	1.51	181	2.00	242
		2.53	304	1.84	221	1.84	221	2.48	298

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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High Narrow Reach-In Beverage Merchandiser

ONRBH - 2, 3, 4 & 5-door

Guidelines & Control Settings

Model ³	⁴ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁵ Air Velocity (FPM)
ONRBH Deli/Dairy	734	32	6-8	36	38	405
ONRBH Beverage	704	34	6-8	38	40	405

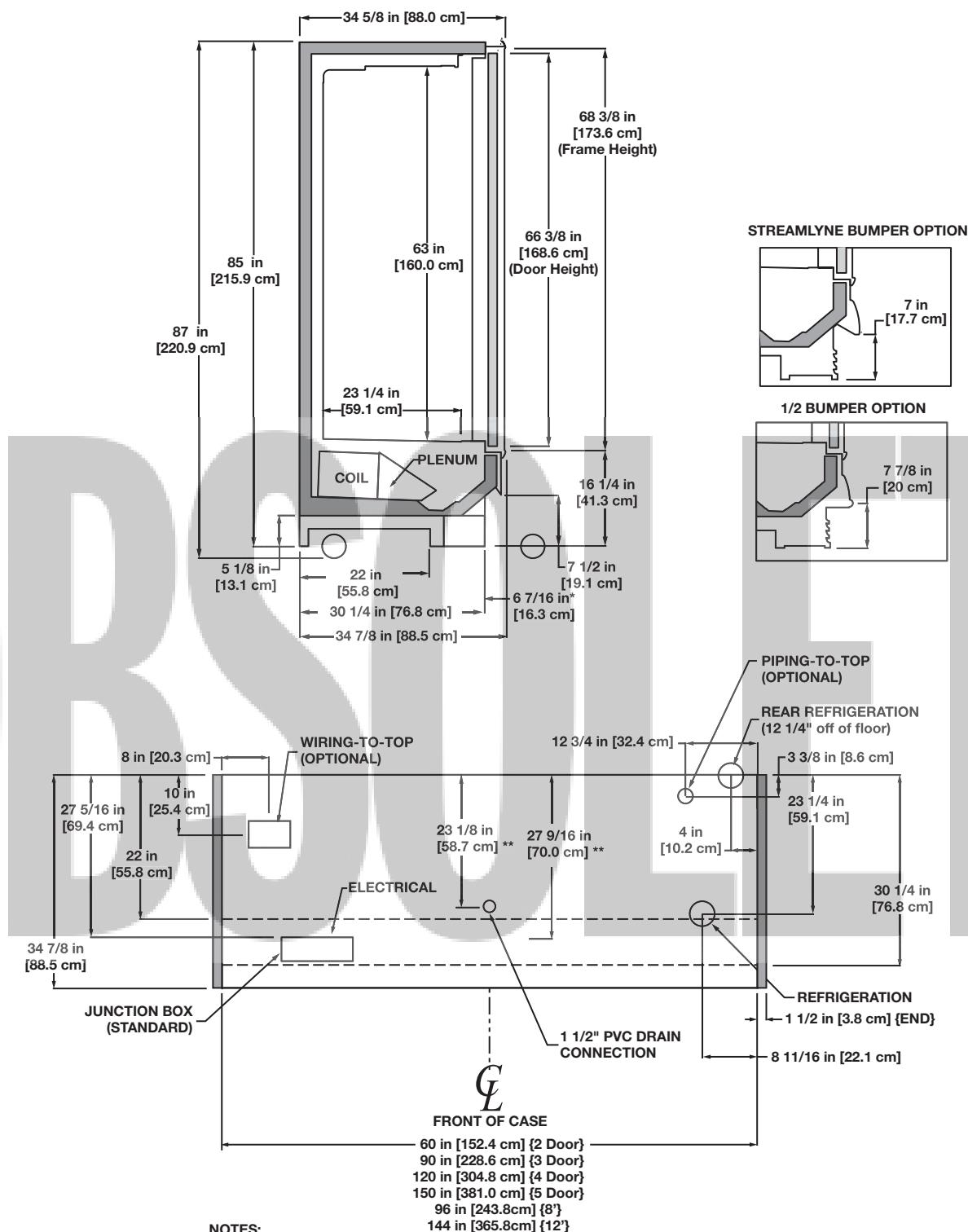
Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONRBH	4 ⁶	6-8	30	47	30	40	24	47	- - - ⁷	- - -

- 1 Low-power lights. High-power option available.
- 2 Eliminator values given for doors with no heat on the glass.
- 3 All data listed is for an ONRB configured with 20" shelves.
- 4 BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- 5 Average discharge air velocity at peak of defrost.
- 6 If timed-off defrost is utilized. If electric or hot gas defrost is utilized, case only requires 1 defrost per day.
- 7 "- - -" indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP- ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (ALL LENGTHS) 1/2"
- LIQUID LINE (ALL LENGTHS) - 3/8", LIQUID LINE w/ HOT GAS DEFROST (ALL LENGTHS) - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20" & 22"; SOLID SHELVES 18", 20" & 22"
- TOP SHELF MUST BE 20" OR SHORTER
- RECOMMENDED CONFIGURATION IS 20" SHELF AND 4 22" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Glass Door Reach-In Beverage Merchandiser

ORB - 2, 3, 4, 5 & 6-door/ 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters				
		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ORB ¹	2-door	2	1.00	60	0.31	18	4.39	914	5.06	1215
	3-door	3	1.50	90	0.46	28	4.96	1032	5.71	1370
	4-door	4	2.00	120	0.61	37	6.51	1355	7.55	1813
	5-door	5	2.50	150	0.77	46	7.96	1655	9.17	2201
	6-door	6	3.00	180	0.92	55	9.40	1955	10.79	2589
	8'	3	1.50	90	0.46	28	3.85	800	4.44	1065
	12'	4	2.00	120	0.61	37	5.77	1200	6.67	1600

Lighting Data

Model		Fluorescent		Optimax 2 ² LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire1 ² LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ORB	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154			
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145			
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139			
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135			
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133			
	8'	1.90	228	0.58	69	130	0.73	87	112	0.38	45	150			
	12'	2.40	288	0.77	92	120	0.97	116	105	0.50	60	140			

Anti-Condensate Heater Data

Model		Anthony						Gemtron Tundra (NT)			
		101		Eliminator ³		Eliminator 2 ³		120 Volts		120 Volts	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ORB	2-door	1.02	122	0.75	90	0.75	90	0.97	116		
	3-door	1.50	180	1.11	133	1.11	133	1.43	172		
	4-door	1.97	236	1.44	173	1.44	173	1.93	231		
	5-door	2.41	289	1.75	210	1.75	210	2.40	288		
	6-door	2.93	351	2.14	257	2.14	257	3.60	432		
	8'	1.55	186	1.13	135	1.13	135	---	---		
	12'	2.15	258	1.56	187	1.56	187	---	---		

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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Glass Door Reach-In Beverage Merchandiser

ORB - 2, 3, 4, 5 & 6-door/ 8' & 12'

Guidelines & Control Settings

Model		⁵ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁶ Air Velocity (FPM)
ORB Deli/Dairy	2-6 door	734	32	6-8	36	38	380
ORB Beverage	2-6 door	704	34	6-8	38	40	380
ORB Deli/Dairy	8' & 12'	853	32	6-8	36	38	380
ORB Beverage	8' & 12'	823	34	6-8	38	40	380

Defrost Controls

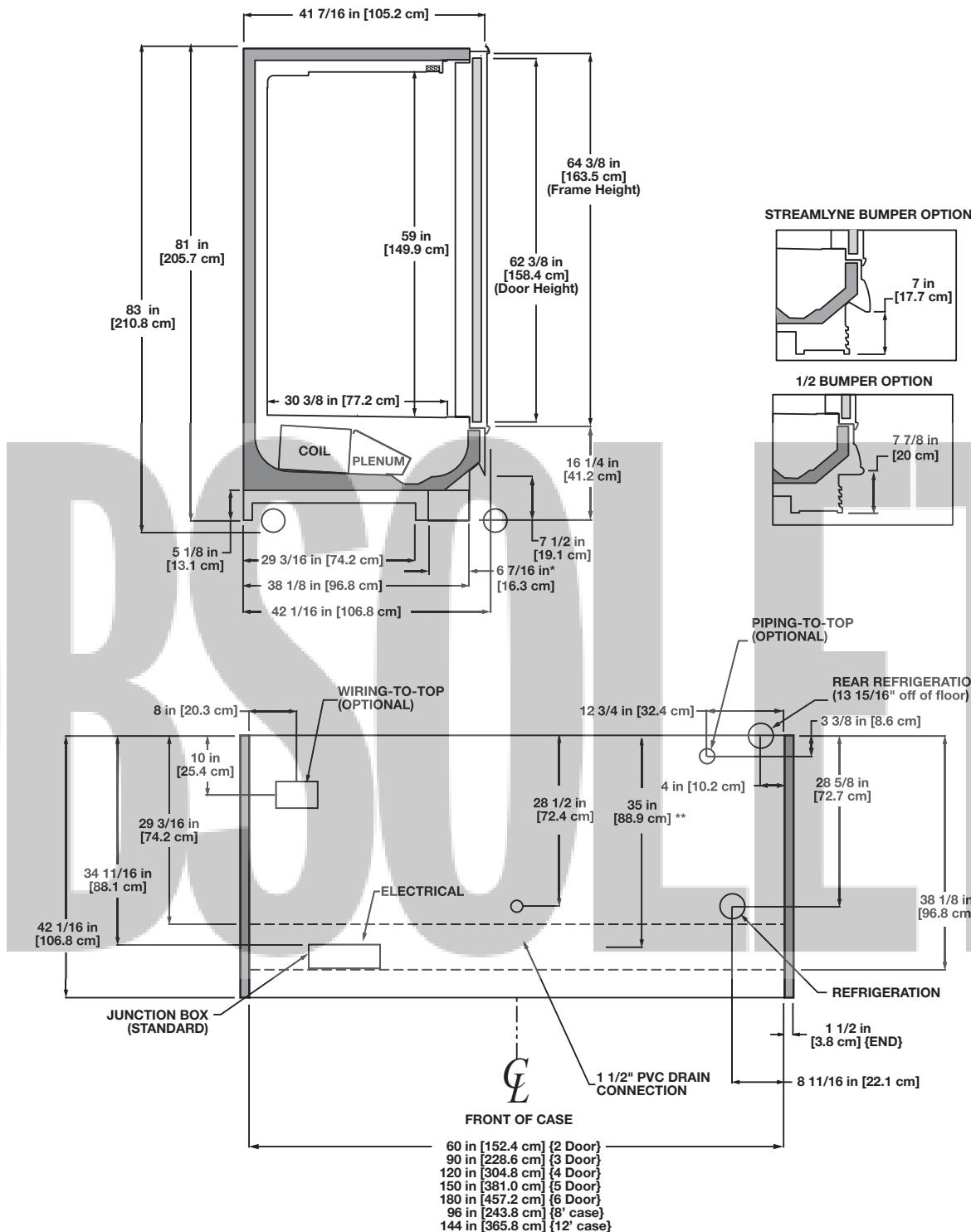
Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ORB	4 ⁷	6-8	30	47	30	40	24	47	---	---

- 1 ORB-8' has 3 doors (32" each); ORB-12' has 4 doors (36" each).
- 2 Low-power lights. High-power option available.
- 3 Eliminator values given for doors with no heat on the glass.
- 4 “---” indicates not an option on this case model.
- 5 BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- 6 Average discharge air velocity at peak of defrost.
- 7 If timed-off defrost is utilized. If electric or hot gas defrost is utilized, case only requires 1 defrost per day.

REACH-IN
Beverage

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP- ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (ALL LENGTHS) 1/2"
- LIQUID LINE (ALL LENGTHS) - 3/8", LIQUID LINE w/ HOT GAS DEFROST (ALL LENGTHS) - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20", 22" & 23 1/2"; SOLID SHELVES 18", 20", 22", 24" & 27"
- TOP SHELF MUST BE 24" OR SHORTER WHEN USING 27" SHELVES.
- RECOMMENDED CONFIGURATION IS 1 - 24" SHELF AND 4 - 27" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Glass Door Reach-In Rear Load Beverage Merchandiser

ORBR - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters				
		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ORBR	8'	3	1.50	90	0.46	28	3.85	800	4.44	1065
	12'	4	2.00	120	0.61	37	5.75	1200	6.67	1600

Lighting Data

Model		Fluorescent		Optimax 2 ¹ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ¹ LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ORBR	8'	1.90	228	0.58	69	130	0.73	87	112	0.38	45	150			
	12'	2.40	288	0.77	92	120	0.97	116	105	0.50	60	140			

Anti-Condensate Heater Data

Model		Anthony					
		101		Eliminator ²		Eliminator 2 ²	
		120 Volts		120 Volts		120 Volts	
Model		Amps	Watts	Amps	Watts	Amps	Watts
ORBR	8'	1.55	93	1.13	135	1.13	135
	12'	2.15	258	1.56	187	1.56	187

Guidelines & Control Settings

Model ³	⁴ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)		Discharge Air (°F)	Return Air (°F)	Discharge ⁵ Air Velocity (FPM)
			1054	34			
ORBR			6-8	38	40	380	

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ORBR	4 ⁶	6-8	30	47	30	40	24	47	---	---

1 Low-power lights. High-power option available.

2 Eliminator values given for doors with no heat on the glass.

3 ORBR-8' has 3 doors, ORBR-12' has 4 doors.

4 BTUH/door notes:

- Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.

- Standard fans increase refrigeration load by 96 BTUH/fan.

5 Average discharge air velocity at peak of defrost.

6 If timed-off defrost is utilized. If electric or hot gas defrost is utilized, case only requires 1 defrost per day.

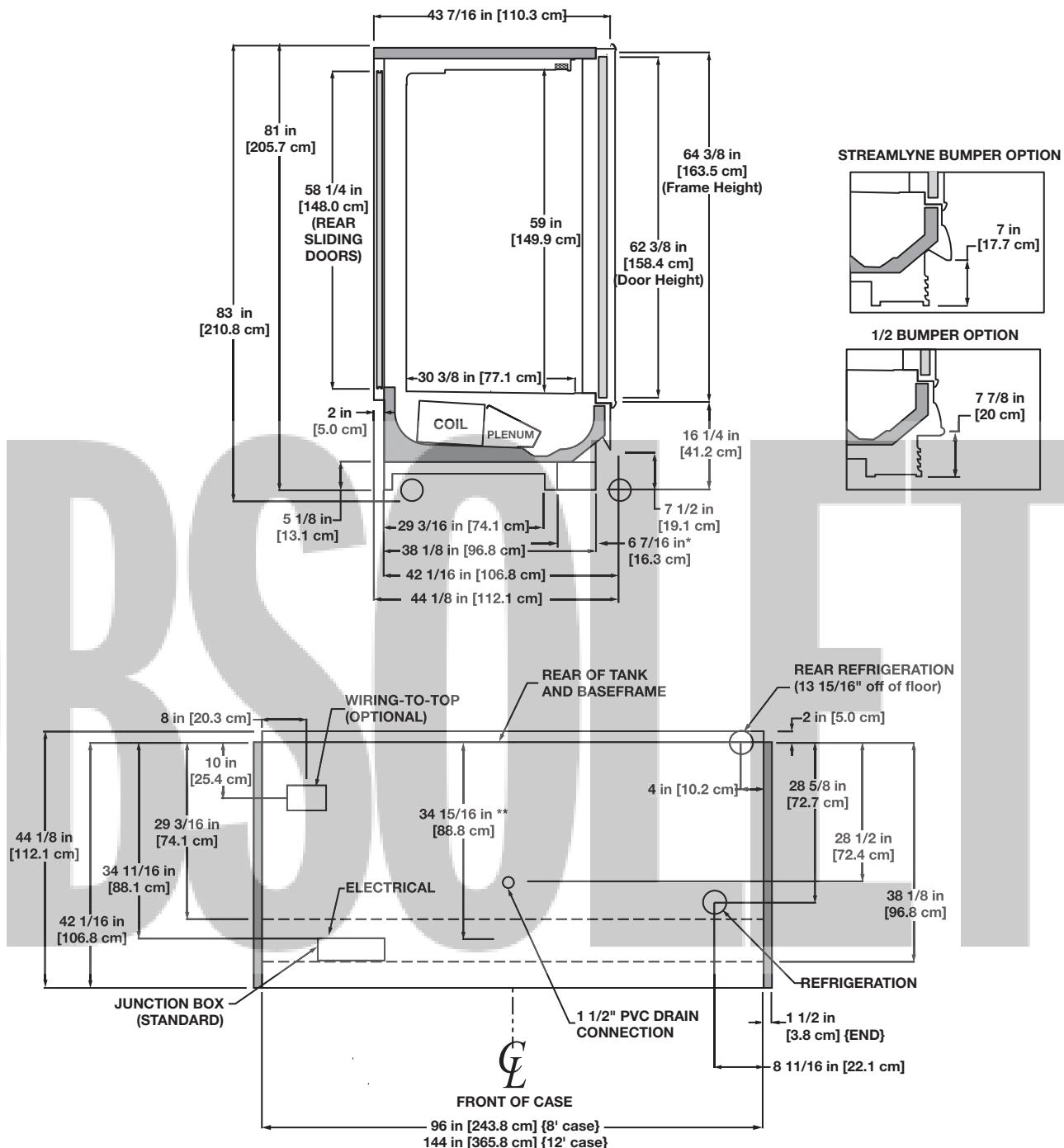
7 “---” indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE
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High Reach-In Beverage Merchandiser

ORBH - 2, 3, 4, 5, 6-door, 8' & 12'

Electrical Data

Model ¹	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters				
		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ORBH	2-door	2	1.00	60	0.31	18	4.39	914	5.06	1215
	3-door	3	1.50	90	0.46	28	4.96	1032	5.71	1370
	4-door	4	2.00	120	0.61	37	6.51	1355	7.55	1813
	5-door	5	2.50	150	0.77	46	7.96	1655	9.17	2201
	6-door	6	3.00	180	0.92	55	9.40	1955	10.79	2589
	8'	3	1.50	90	0.46	28	3.85	800	4.44	1065
	12'	4	2.00	120	0.61	37	5.78	1200	6.67	1600

Lighting Data

Model		Fluorescent		Optimax 2 ² LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ² LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
		2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154		
ORBH	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145			
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139			
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135			
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133			
	8'	1.90	228	0.58	69	130	0.73	87	115	0.38	45	150			
	12'	2.40	288	0.77	92	120	0.97	116	106	0.50	60	140			

Anti-Condensate Heater Data

Model		Anthony						Gemtron Tundra (NT)			
		101		Eliminator ³		Eliminator 2 ³		120 Volts		120 Volts	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ORBH	2-door	1.06	127	0.78	94	0.78	94	1.00	121		
	3-door	1.54	185	1.13	136	1.13	136	1.49	179		
	4-door	2.06	247	1.51	181	1.51	181	2.00	242		
	5-door	2.53	304	1.84	221	1.84	221	2.48	298		
	6-door	3.05	366	2.23	267	2.23	267	2.97	356		
	8'	1.61	193	---	---	---	---	---	---		
	12'	2.23	268	---	---	---	---	---	---		

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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High Reach-In Beverage Merchandiser

ORBH - 2, 3, 4, 5, 6-door, 8' & 12'

Guidelines & Control Settings

Model	⁵ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁶ Air Velocity (FPM)
ORBH Deli/Dairy: 2-, 3-, 4-, 5-, & 6-door	734	32	6-8	36	38	280
ORBH Beverage: 2-, 3-, 4-, 5-, & 6-door	704	34	6-8	38	40	280
ORBH ³ Deli/Dairy: 8' & 12'	853	32	6-8	36	38	280
ORBH ³ Beverage: 8' & 12'	823	34	6-8	38	40	280

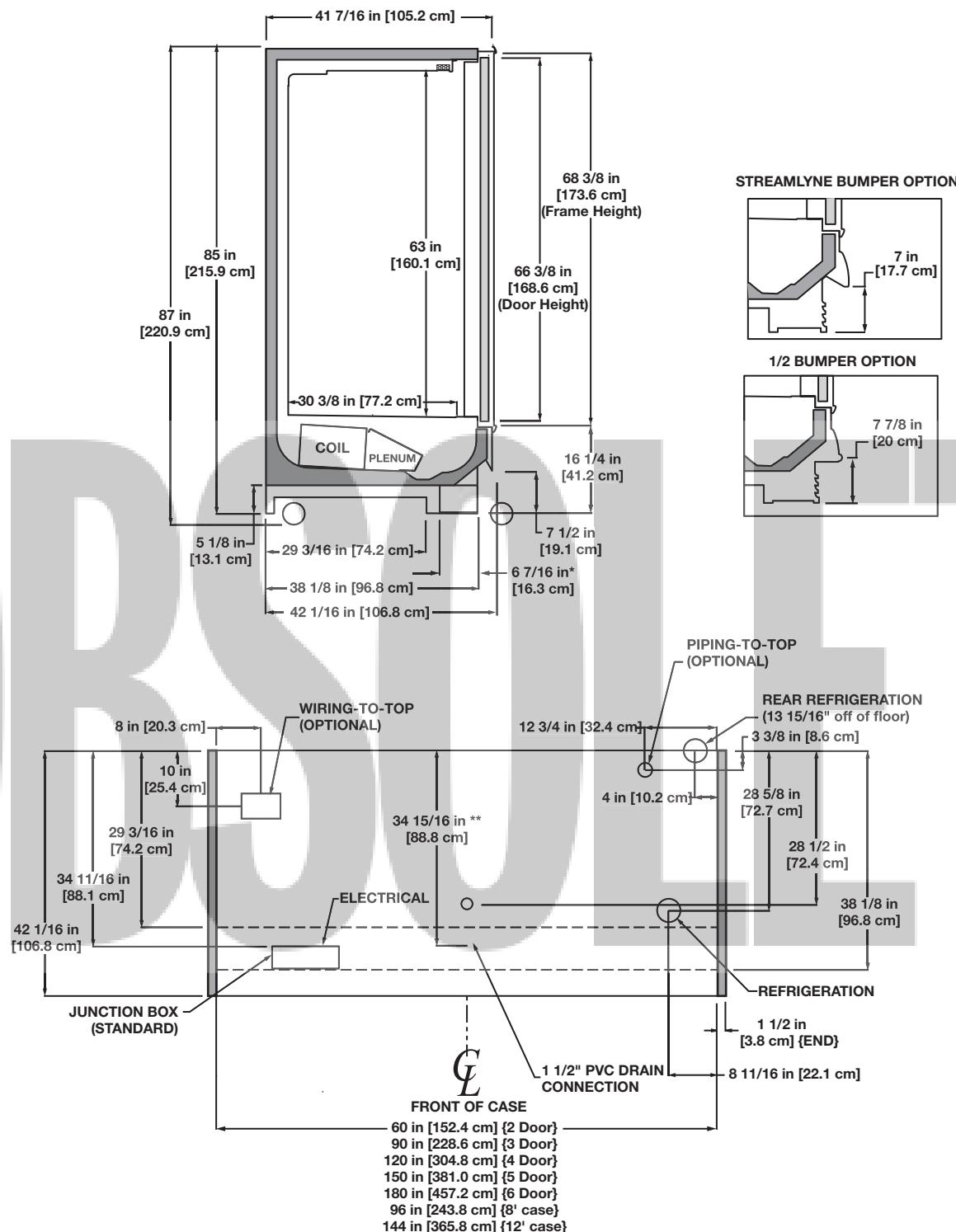
Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ORBH	4 ⁷	6-8	30	47	30	40	24	47	---	---

- 1 ORBH-8' has 3 doors (32" each); ORBH-12' has 4 doors (36" each).
- 2 Low-power lights. High-power option available.
- 3 Eliminator values given for doors with no heat on the glass.
- 4 “---” indicates not an option on this case model.
- 5 BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- 6 Average discharge air velocity at peak of defrost.
- 7 If timed-off defrost is utilized. If electric or hot gas defrost is utilized, case only requires 1 defrost per day.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP- ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (ALL LENGTHS) 1/2"
- LIQUID LINE (ALL LENGTHS) - 3/8", LIQUID LINE w/ HOT GAS DEFROST (ALL LENGTHS) - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20", 22" & 23 1/2"; SOLID SHELVES 18", 20", 22", 24" & 27"
- TOP SHELF MUST BE 24" OR SHORTER WHEN USING 27" SHELVES
- RECOMMENDED CONFIGURATION IS 1 - 24" SHELF AND 4 - 27" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Narrow Reach-In Frozen Food/Ice Cream Merchandiser

ONRZ - 2, 3, 4, 5 & 6-door

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters (1-Phase)				Defrost Heaters ¹ (3-Phase)				
		120 Volts		120 Volts		208 Volts		240 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps ²	Watts	Amps ²	Watts	
ONRZ	2-door	2	1.00	60	0.31	18	10.99	2286	12.66	3038	7.61	2286	8.76	3038
	3-door	3	1.50	90	0.46	28	12.40	2580	14.27	3425	8.59	2580	9.88	3425
	4-door	4	2.00	120	0.611	37	16.29	3388	18.89	4533	11.28	3388	13.08	4533
	5-door	5	2.50	150	0.77	46	19.89	4138	22.93	5503	13.78	4138	15.88	5503
	6-door	6	3.00	180	0.92	55	23.09	4803	26.65	6395	16.28	4803	18.46	6395

Lighting Data

Model	Fluorescent	Optimax 2 ³ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ³ LED		Crossfire BTUH Credit (per door)			
		120 Volts			120 Volts			120 Volts					
		Amps	Watts		Amps	Watts		Amps	Watts				
ONRZ	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154	
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145	
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139	
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135	
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133	

Anti-Condensate Heater Data

Model	Anthony	Anthony						Gemtron					
		101		Eliminator ⁴		Eliminator 2 ⁴		Polar		Polar LE		Polar EF	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONRZ	2-door	3.42	410	1.74	209	1.21	145	2.69	323	1.67	201	1.21	145
	3-door	4.90	588	2.58	309	1.78	213	4.00	480	2.47	297	1.78	213
	4-door	6.37	764	3.36	403	2.30	276	5.39	648	3.35	404	2.43	292
	5-door	7.85	942	4.22	506	2.89	346	6.67	801	4.12	496	2.97	356
	6-door	9.34	1121	5.06	607	3.47	416	8.00	961	4.94	595	3.56	427

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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Narrow Reach-In Frozen Food/Ice Cream Merchandiser

ONRZ - 2, 3, 4, 5 & 6-door

Guidelines & Control Settings

Model ⁵	⁷ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁸ Air Velocity (FPM)
ONRZ F - Standard	1249	-11	3-5	-3	0	460
ONRZ C - Standard	1309	-17	3-5	-8	-5	460
ONRZ F - Eliminator/Polar LE ⁶	1095	-11	3-5	-3	0	460
ONRZ C - Eliminator/Polar LE ⁶	1133	-17	3-5	-8	-5	460

Defrost Controls

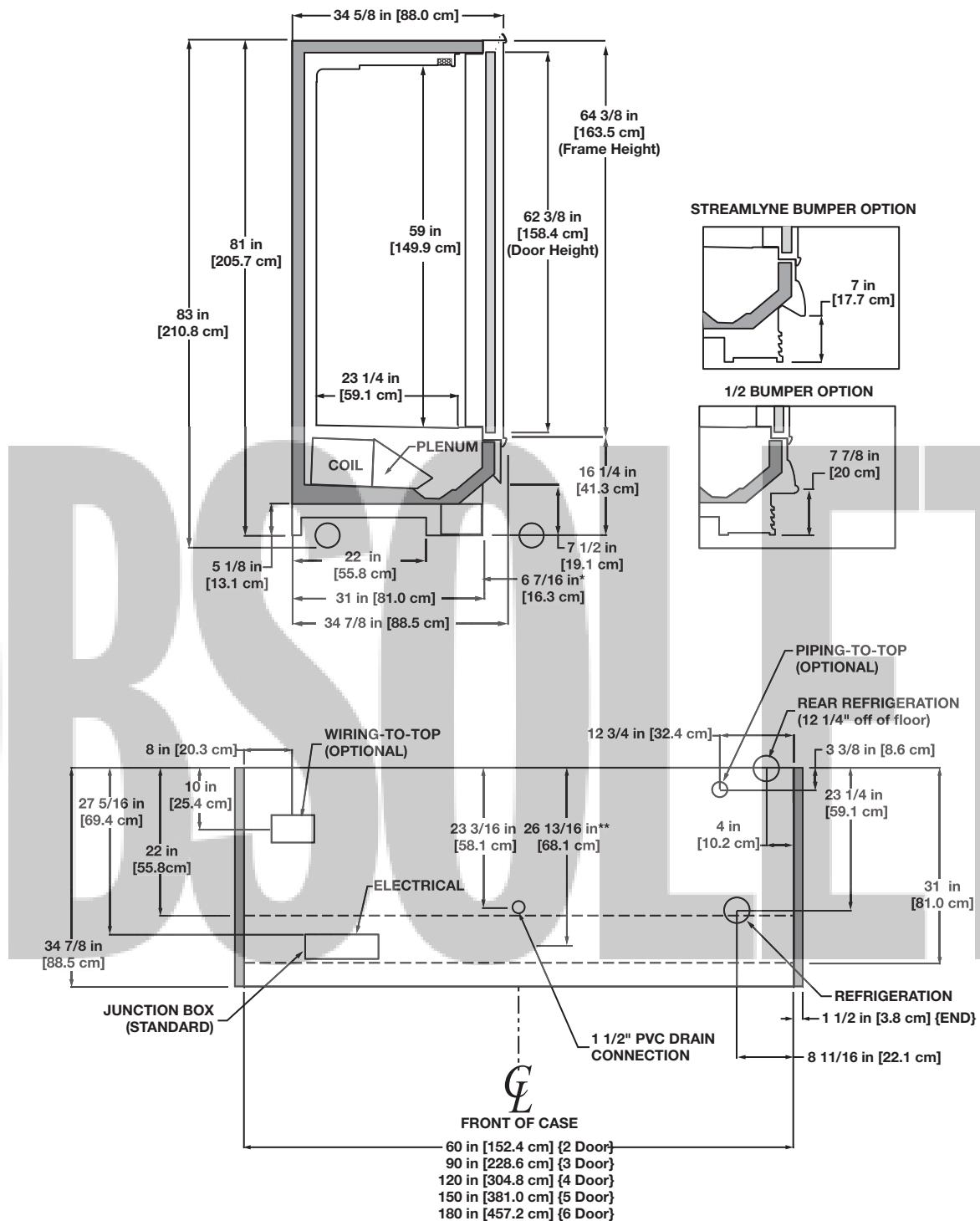
Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONRZ	1	13-15	46	73 ⁹	---	---	24	73 ¹¹	---	---

- 3-phase load is unbalanced.
- Figure given is maximum line amperage per phase.
- Low-power lights. High-power option available.
- Eliminator values given for doors with no heat on the glass.
- "F" = Frozen food, "C" = Ice cream.
- Data given for cases with Eliminator and Polar LE Doors.
- BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- Average discharge air velocity at peak of defrost.
- The recommended location is in the center of the coil on the second pass. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.
- NOTE: "---" not an option on this case model.
- The recommended location is on the dump line. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

REACH-IN
Frozen Food/Ice Cream

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP- ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (2DR & 3DR) 5/8", SUCTION LINE (4DR, 5DR & 6DR) 7/8"
- LIQUID LINE (ALL LENGTHS) - 3/8", LIQUID LINE w/ HOT GAS DEFROST (ALL LENGTHS) - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20" & 22"; SOLID SHELVES 18", 20" & 22"
- TOP SHELF MUST BE 20" OR SHORTER
- RECOMMENDED CONFIGURATION IS 20" SHELF AND 4 22" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

High Narrow Reach-In Frozen Food/Ice Cream Merchandiser

ONRZH - 2, 3, 4, 5 & 6-door

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters (1-Phase)				Defrost Heaters ¹ (3-Phase)				
		120 Volts		120 Volts		208 Volts		240 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps ²	Watts	Amps ²	Watts	
ONRZH	2-door	2	1.00	60	0.31	18	10.99	2286	12.66	3038	7.61	2286	8.76	3038
	3-door	3	1.50	90	0.46	28	12.40	2580	14.27	3425	8.59	2580	9.88	3425
	4-door	4	2.00	120	0.611	37	16.29	3388	18.89	4533	11.28	3388	13.08	4533
	5-door	5	2.50	150	0.77	46	19.89	4138	22.93	5503	13.78	4138	15.88	5503
	6-door	6	3.00	180	0.92	55	23.09	4803	26.65	6395	16.28	4803	18.46	6395

Lighting Data

Model		Fluorescent		Optimax 2 ³ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ³ LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ONRZH	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154			
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145			
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139			
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135			
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133			

Anti-Condensate Heater Data

Model		Anthony						Gemtron					
		101		Eliminator ⁴		Eliminator 2 ⁴		Polar		Polar LE		Polar EF	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONRZH	2-door	4.10	492	1.79	214	1.24	149	2.39	287	1.67	201	1.19	143
	3-door	5.89	707	2.63	315	1.81	217	3.58	430	2.50	301	1.78	214
	4-door	7.77	932	3.46	415	2.37	284	4.77	573	3.33	401	2.37	285
	5-door	9.61	1154	4.35	522	2.98	358	6.00	720	4.20	505	3.00	360
	6-door	11.23	1347	5.20	624	3.56	427	7.14	857	4.98	599	3.54	425

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



High Narrow Reach-In Frozen Food/Ice Cream Merchandiser

ONRZH - 2, 3, 4, 5 & 6-door

Guidelines & Control Settings

Model ⁵	⁷ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁸ Air Velocity (FPM)
ONRZH F - Standard	1249	-11	3-5	-3	0	405
ONRZH C - Standard	1309	-17	3-5	-8	-5	405
ONRZH F - Eliminator/Polar LE ⁶	1095	-11	3-5	-3	0	405
ONRZH C - Eliminator/Polar LE ⁶	1133	-17	3-5	-8	-5	405

Defrost Controls

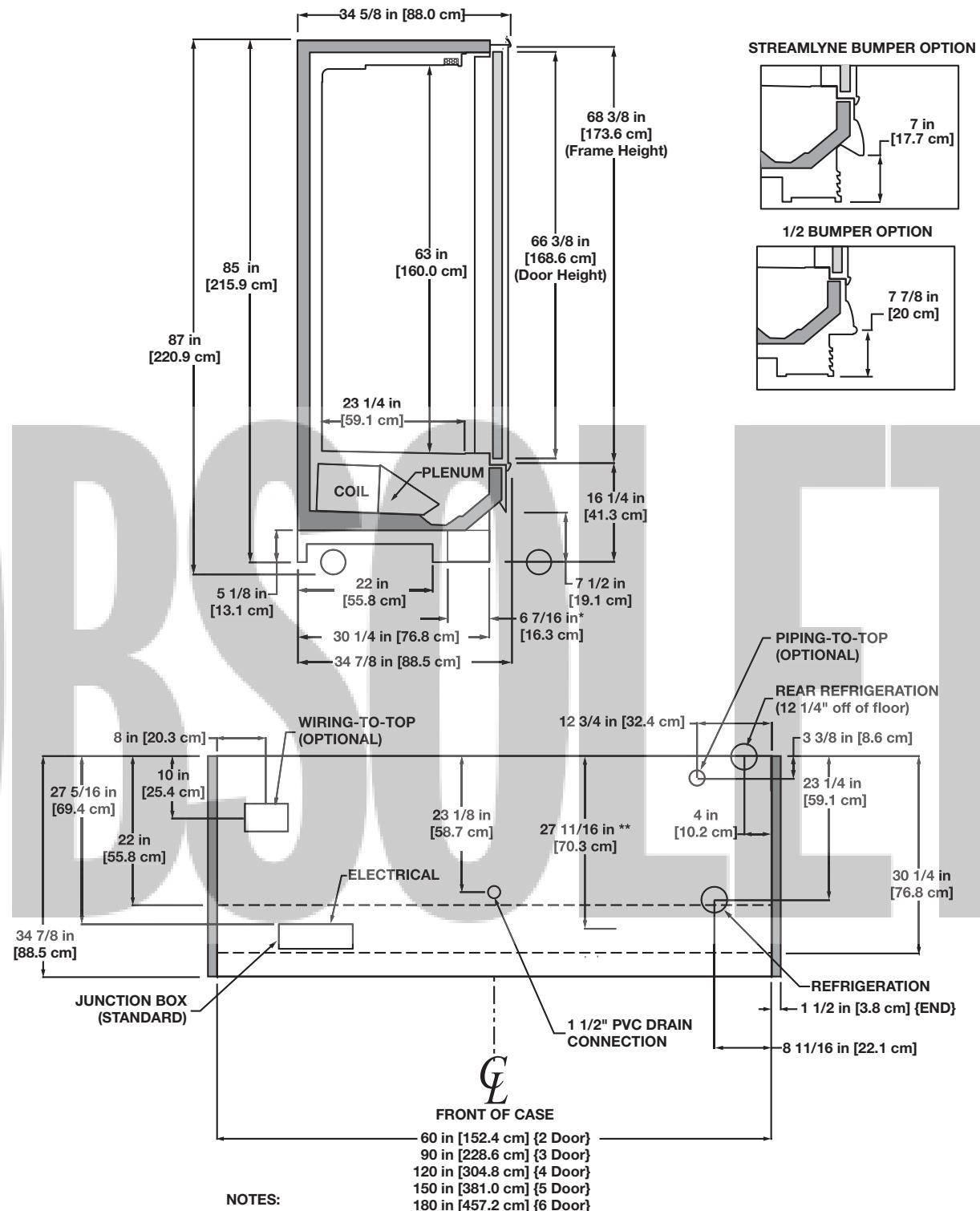
Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONRZH	1	13-15	46	73 ⁹	---	---	24	73 ¹¹	---	---

- 3-phase load is unbalanced.
- Figure given is maximum line amperage per phase.
- Low-power lights. High-power option available.
- Eliminator values given for doors with no heat on the glass.
- "F" = Frozen food, "C" = Ice cream.
- Data given for cases with Eliminator and Polar LE Doors.
- BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- Average discharge air velocity at peak of defrost.
- The recommended location is in the center of the coil on the second pass. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.
- NOTE: "---" not an option on this case model.
- The recommended location is on the dump line. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

REACH-IN
Frozen Food/Ice Cream

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP- ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (2DR & 3DR) 5/8", SUCTION LINE (4DR, 5DR & 6DR) 7/8"
- LIQUID LINE (ALL LENGTHS) - 3/8", LIQUID LINE w/ HOT GAS DEFROST (ALL LENGTHS) - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20" & 22"; SOLID SHELVES 18", 20" & 22"
- TOP SHELF MUST BE 20" OR SHORTER
- RECOMMENDED CONFIGURATION IS 20" SHELF AND 4 22" SHELVES BELOW TOP SHELF)
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Glass Door Reach-In Back-to-Back Frozen Food/Ice Cream Merchandiser

ONRZHBO - 2-door

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters (1-Phase)				Defrost Heaters (3-Phase)				
		120 Volts		120 Volts		208 Volts		240 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps ¹	Watts	Amps ¹	Watts	
ONRZHBO	2-door	4	1.0	60	0.4	18	13.17	2742	15.18	3645	7.62	2742	8.78	3645

Anti-Condensate Heater Data

Model	Anthony C2K		
	120 Volts		
	Amps	Watts	
ONRZHBO	2-door	4.25	5.10

Lighting Data

Model	Fluorescent				Optimax 2 ² LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)
	120 Volts		120 Volts		120 Volts	Amps		120 Volts	Amps	
	Amps	Watts	Amps	Watts	Amps	Watts		Amps	Watts	
ONRZHBO	2-door	1.50	180	0.38	46	138	0.48	58	126	126

Guidelines & Control Settings

Model	³ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)		Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
			3 - 5	-8			
ONRZHBO	1194	-17					

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONRZHBO	1	13-15	46 ⁵	73	---	---	24	73 ⁷	---	---

1 Figure given is maximum line amperage per phase.

2 Low-power lights. High-power option available.

3 BTUH/door notes:

- Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.

- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

5 The recommended location is in the center of the coil on the second pass. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

6 NOTE: " - " not an option on this case model.

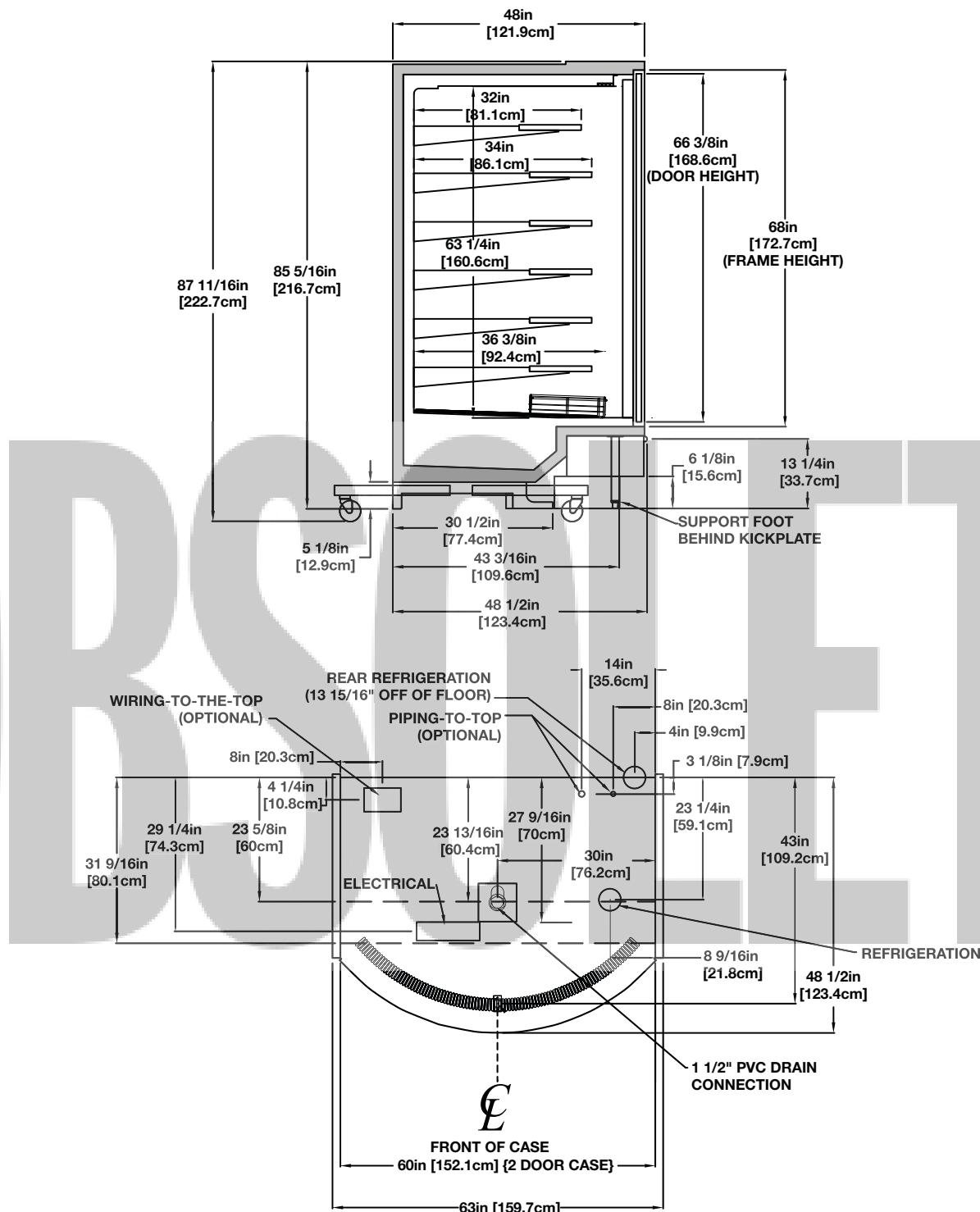
7 The recommended location is on the dump line. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE
A DOVER COMPANY



Glass Door Reach-In Frozen Food/Ice Cream Merchandiser

ORZ - 2, 3, 4, 5 & 6-door

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters (1-Phase)				Defrost Heaters ¹ (3-Phase)				
		120 Volts		120 Volts		208 Volts		240 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps ²	Watts	Amps ²	Watts	
ORZ	2-door	2	1.00	60	0.31	18	10.99	2286	12.66	3038	7.61	2286	8.76	3038
	3-door	3	1.50	90	0.46	28	12.40	2580	14.27	3425	8.59	2580	9.88	3425
	4-door	4	2.00	120	0.611	37	16.29	3388	18.89	4533	11.28	3388	13.08	4533
	5-door	5	2.50	150	0.77	46	19.89	4138	22.93	5503	13.78	4138	15.88	5503
	6-door	6	3.00	180	0.92	55	23.09	4803	26.65	6395	16.28	4803	18.46	6395

Lighting Data

Model		Fluorescent		Optimax 2 ³ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ³ LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ORZ	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154			
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145			
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139			
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135			
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133			

Anti-Condensate Heater Data

Model		Anthony				Gemtron							
		101		Eliminator ⁴		Eliminator 2 ⁴		Polar		Polar LE		Polar EF	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ORZ	2-door	3.42	410	1.74	209	1.21	145	2.69	323	1.67	201	1.21	145
	3-door	4.90	588	2.58	309	1.78	213	4.00	480	2.47	297	1.78	213
	4-door	6.37	764	3.36	403	2.30	276	5.39	648	3.35	404	2.43	292
	5-door	7.85	942	4.22	506	2.89	346	6.67	801	4.12	496	2.97	356
	6-door	9.34	1121	5.06	607	3.47	416	8.00	961	4.94	595	3.56	427

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELENCE®
A DOVER COMPANY

Glass Door Reach-In Frozen Food/Ice Cream Merchandiser

ORZ - 2, 3, 4, 5 & 6-door

Guidelines & Control Settings

Model ⁵	⁷ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁸ Air Velocity (FPM)
ORZ F - Standard	1249	-11	3-5	-3	0	405
ORZ C - Standard	1309	-17	3-5	-8	-5	405
ORZ F - Eliminator/Polar LE ⁶	1095	-11	3-5	-3	0	405
ORZ C - Eliminator/Polar LE ⁶	1133	-17	3-5	-8	-5	405

Defrost Controls

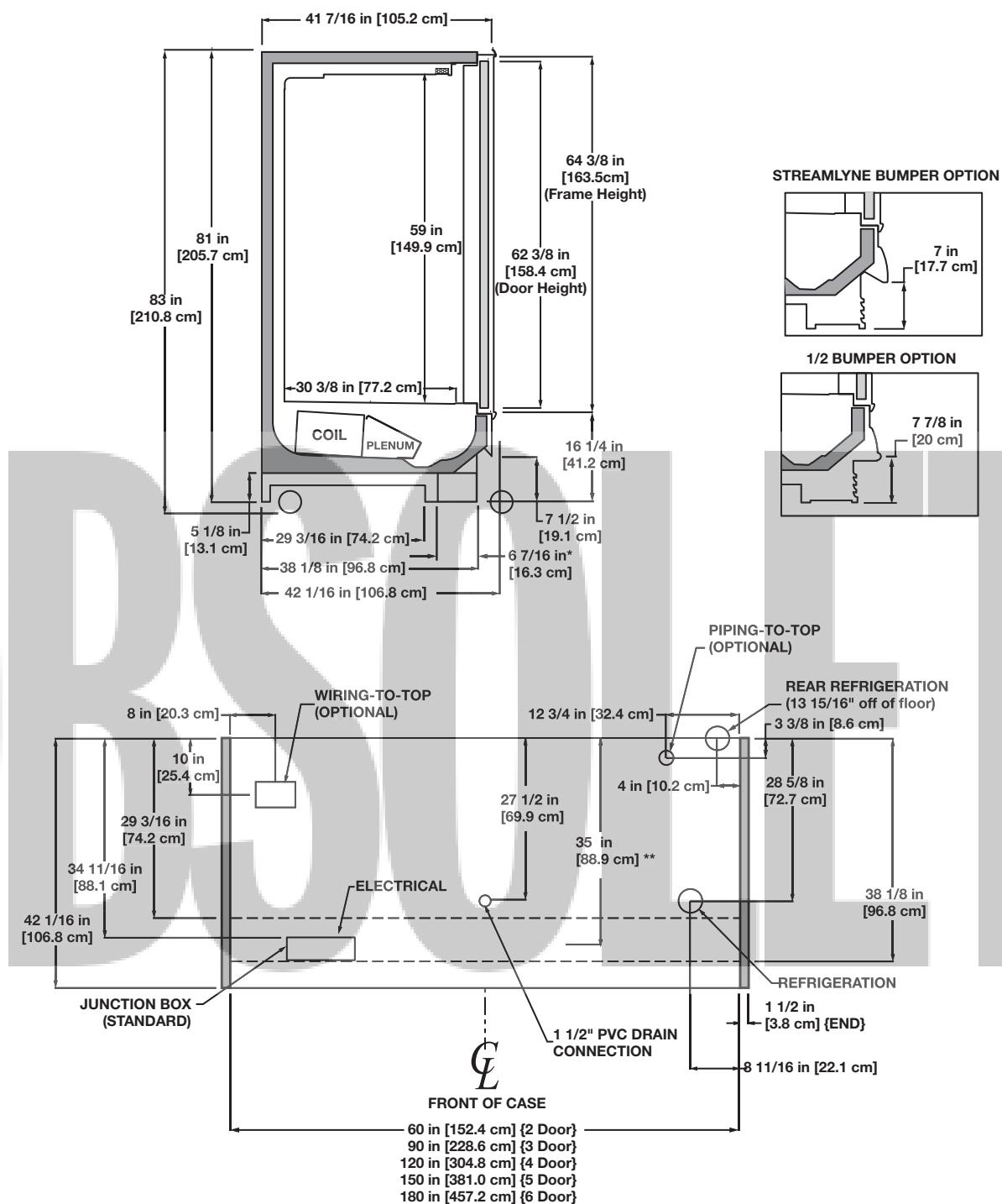
Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ORZ	1	13-15	46	73 ⁹	---	---	24	73 ¹¹	---	---

- 1 3-phase load is unbalanced.
- 2 Figure given is maximum line amperage per phase.
- 3 Low-power lights. High-power option available.
- 4 Eliminator values given for doors with no heat on the glass.
- 5 "F" = Frozen food, "C" = Ice cream.
- 6 Data given for cases with Eliminator and Polar LE Doors.
- 7 BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- 8 Average discharge air velocity at peak of defrost.
- 9 The recommended location is in the center of the coil on the second pass. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.
- 10 NOTE: "---" not an option on this case model.
- 11 The recommended location is on the dump line. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

REACH-IN
Frozen Food/Ice Cream

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



OBSOLETE

High Reach-In Frozen Food/Ice Cream Merchandiser

ORZH - 2, 3, 4, 5 & 6-door

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters (1-Phase)				Defrost Heaters ¹ (3-Phase)				
		120 Volts		120 Volts		208 Volts		240 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps ²	Watts	Amps ²	Watts	
ORZH	2-door	2	1.00	60	0.31	18	10.99	2286	12.66	3038	7.61	2286	8.76	3038
	3-door	3	1.50	90	0.46	28	12.40	2580	14.27	3425	8.59	2580	9.88	3425
	4-door	4	2.00	120	0.611	37	16.29	3388	18.89	4533	11.28	3388	13.08	4533
	5-door	5	2.50	150	0.77	46	19.89	4138	22.93	5503	13.78	4138	15.88	5503
	6-door	6	3.00	180	0.92	55	23.09	4803	26.65	6395	16.28	4803	18.46	6395

Lighting Data

Model	Fluorescent		Optimax 2 ³ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ³ LED		Crossfire BTUH Credit (per door)			
	120 Volts		120 Volts			120 Volts			120 Volts					
	Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ORZH	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154		
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145		
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139		
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135		
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133		

Anti-Condensate Heater Data

Model	Anthony								Gemtron							
	101		Eliminator ⁴		Eliminator 2 ⁴		Polar		Polar LE		Polar EF					
	120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts					
	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ORZH	2-door	4.10	492	1.79	214	1.24	149	2.39	287	1.67	201	1.19	143			
	3-door	5.89	707	2.63	315	1.81	217	3.58	430	2.50	301	1.78	214			
	4-door	7.77	932	3.46	415	2.37	284	4.77	573	3.33	401	2.37	285			
	5-door	9.61	1154	4.35	522	2.98	358	6.00	720	4.20	505	3.00	360			
	6-door	11.23	1347	5.20	624	3.56	427	7.14	857	4.98	599	3.54	425			

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE®
A DOVER COMPANY

High Reach-In Frozen Food/Ice Cream Merchandiser

ORZH - 2, 3, 4, 5 & 6-door

Guidelines & Control Settings

Model ⁵	⁷ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁸ Air Velocity (FPM)
ORZH F - Standard	1249	-11	3-5	-3	0	405
ORZH C - Standard	1309	-17	3-5	-8	-5	405
ORZH F - Eliminator/Polar LE ⁶	1095	-11	3-5	-3	0	405
ORZH C - Eliminator/Polar LE ⁶	1133	-17	3-5	-8	-5	405

Defrost Controls

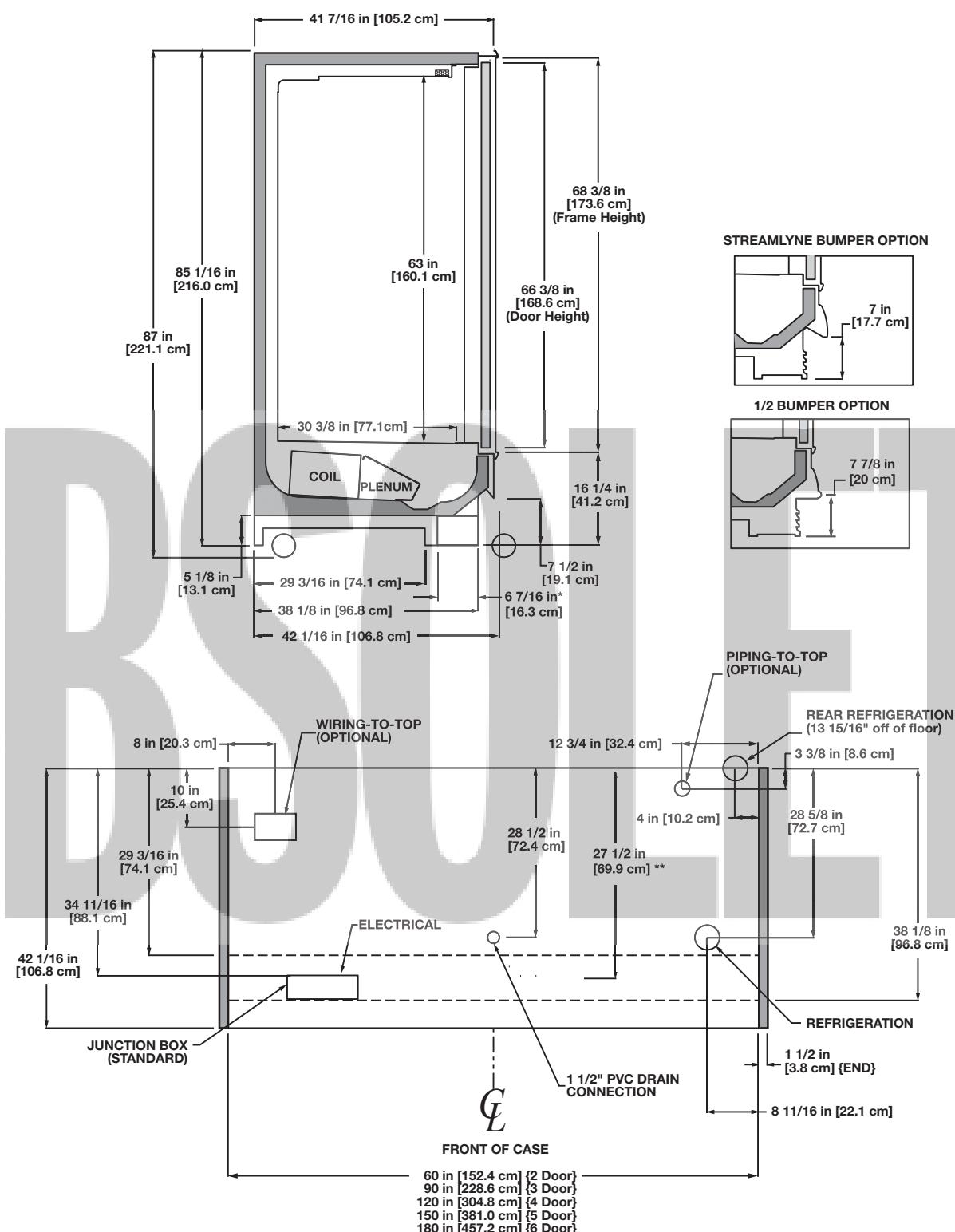
Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ORZH	1	13-15	46	73 ⁹	---	---	24	73 ¹¹	---	---

- 1 3-phase load is unbalanced.
 2 Figure given is maximum line amperage per phase.
 3 Low-power lights. High-power option available.
 4 Eliminator values given for doors with no heat on the glass.
 5 "F" = Frozen food, "C" = Ice cream.
 6 Data given for cases with Eliminator and Polar LE Doors.
 7 BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
 8 Average discharge air velocity at peak of defrost.
 9 The recommended location is in the center of the coil on the second pass. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.
 10 NOTE: "---" not an option on this case model.
 11 The recommended location is on the dump line. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

REACH-IN
Frozen Food/Ice Cream

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP - ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
- SUCTION LINE (2DR & 3DR) 5/8", SUCTION LINE (4DR, 5DR & 6DR) 7/8"
- LIQUID LINE (ALL LENGTHS) - 3/8", LIQUID LINE w/ HOT GAS DEFROST (ALL LENGTHS) - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20", 22" & 23 1/2"; SOLID SHELVES 18", 20", 22", 24" & 27"
- TOP SHELF MUST BE 24" OR SHORTER WHEN USING 27" SHELVES
- RECOMMENDED CONFIGURATION IS 1 - 24" SHELF AND 4 - 27" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Narrow Reach-In Back-to-Back Frozen Food/Ice Cream Merchandiser

ONRIZ - 4, 6, 8, 10 & 12-door

Electrical Data

BACK-TO-BACK CONFIGURATION ¹																		
Model	Fans per Case	Standard Fans				High Efficiency Fans				Defrost Heaters (1-Phase)				Defrost Heaters ² (3-Phase)				
		120 Volts		120 Volts		208 Volts		240 Volts		208 Volts		240 Volts						
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps ³	Watts	Amps ³	Watts					
ONRIZ	4-door	4	2.00	120	0.61	37	21.98	4572	25.32	6076	15.22	4572	17.52	6076				
	6-door	6	3.00	180	0.92	55	24.81	5160	28.54	6850	17.18	5160	19.76	6850				
	8-door	8	4.00	240	1.22	74	32.58	6776	37.78	9066	22.56	6776	26.16	9066				
	10-door	10	5.00	300	1.53	92	39.79	8276	45.86	11006	27.56	8276	31.76	11006				
	12-door	12	6.00	360	1.84	110	46.18	9605	53.29	12790	32.56	9605	36.92	12790				

SINGLE-SIDE DATA

ONRIZ	2-door	2	1.00	60	0.31	18	10.99	2286	12.66	3038	7.61	2286	8.76	3038
	3-door	3	1.50	90	0.46	28	12.40	2580	14.27	3425	8.59	2580	9.88	3425
	4-door	4	2.00	120	0.611	37	16.29	3388	18.89	4533	11.28	3388	13.08	4533
	5-door	5	2.50	150	0.77	46	19.89	4138	22.93	5503	13.78	4138	15.88	5503
	6-door	6	3.00	180	0.92	55	23.09	4803	26.65	6395	16.28	4803	18.46	6395

Lighting Data

BACK-TO-BACK CONFIGURATION															
Model		Fluorescent		Optimax 2 ⁴ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ⁴ LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ONRIZ	4-door	3.00	360	0.77	92	138	0.97	116	126	0.50	60	154			
	6-door	3.80	456	1.15	138	126	1.45	174	112	0.75	90	145			
	8-door	4.80	576	1.53	184	119	1.93	232	105	1.00	120	139			
	10-door	5.80	696	1.92	230	115	2.42	290	100	1.25	150	135			
	12-door	6.80	816	2.30	276	113	2.90	348	98	1.50	180	133			

SINGLE-SIDE DATA													
ONRIZ	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154	
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145	
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139	
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135	
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133	

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE®

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Narrow Reach-In Back-to-Back Frozen Food/Ice Cream Merchandiser

ONRIZ - 4, 6, 8, 10 & 12-door

Anti-Condensate Heater Data

BACK-TO-BACK CONFIGURATION													
Model		Anthony						Gemtron					
		101		Eliminator ⁵		Eliminator 2 ⁵		Polar		Polar LE		Polar EF	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONRIZ	4-door	6.83	820	3.48	418	2.42	290	5.38	646	3.34	402	2.42	290
	6-door	9.79	1176	5.15	618	3.56	427	8.00	961	4.94	595	3.56	427
	8-door	12.73	1528	6.72	807	4.60	552	10.78	1296	6.70	808	4.86	584
	10-door	15.70	1884	8.43	1012	5.77	693	13.34	1602	8.24	992	5.94	712
	12-door	18.67	2241	10.13	1215	6.93	832	16.00	1922	9.88	1190	7.12	854
SINGLE-SIDE DATA													
ONRIZ	2-door	3.42	410	1.74	209	1.21	145	2.69	323	1.67	201	1.21	145
	3-door	4.90	588	2.58	309	1.78	213	4.00	480	2.47	297	1.78	213
	4-door	6.37	764	3.36	403	2.30	276	5.39	648	3.35	404	2.43	292
	5-door	7.85	942	4.22	506	2.89	346	6.67	801	4.12	496	2.97	356
	6-door	9.34	1121	5.06	607	3.47	416	8.00	961	4.94	595	3.56	427

Guidelines & Control Settings

Model ⁶	⁸ BTUH/door	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁹ Air Velocity (FPM)
ONRIZ F - Standard	1066	-11	3-5	-3	0	460
ONRIZ c - Standard	1138	-17	3-5	-8	-5	460
ONRIZ F - Eliminator/Polar LE ⁷	966	-11	3-5	-3	0	460
ONRIZ c - Eliminator/Polar LE ⁷	983	-17	3-5	-8	-5	460

Defrost Controls

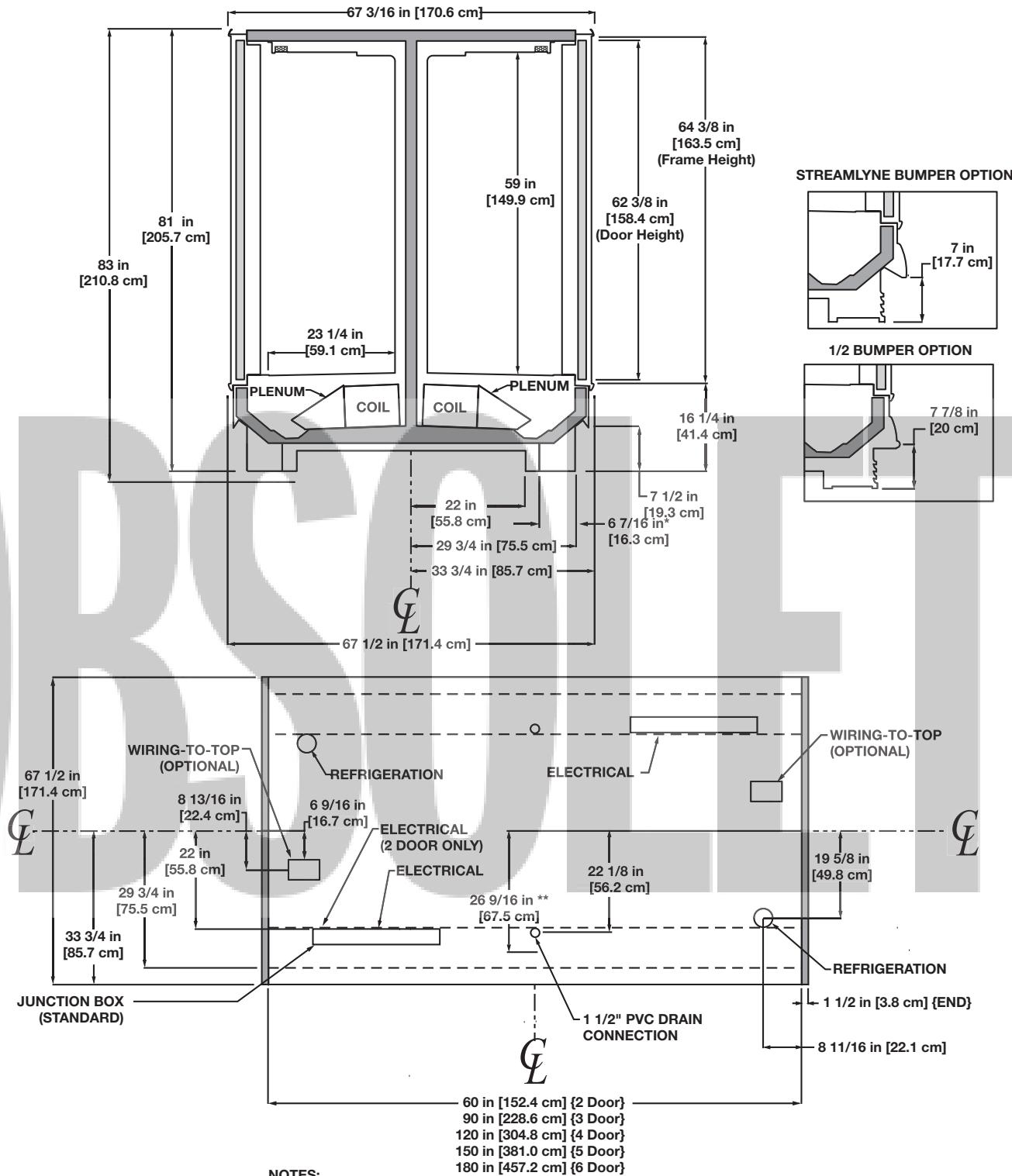
Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONRIZ	1	13-15	46	73 ¹⁰	---	---	24	73 ¹²	---	---

- For back-to-back configurations, customers are required to install separate current-limiting devices for each side of the case per the amperages listed. (Current-limiting devices are available for purchase through Hill PHOENIX)
- 3-phase load is unbalanced.
- Figure given is maximum line amperage per phase.
- Low-power lights. High-power option available.
- Eliminator values given for doors with no heat on the glass.
- "F" = Frozen food, "C" = Ice cream.
- Data given for cases with Eliminator and Polar LE Doors.
- BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04. BTUHs listed are per-side/per-door.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- Average discharge air velocity at peak of defrost.
- The recommended location is in the center of the coil on the second pass. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.
- NOTE: "---" not an option on this case model.
- The recommended location is on the dump line. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELENEC
A DOVER COMPANY



- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP- ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- SUCTION LINE (2DR & 3DR) 5/8", SUCTION LINE (4DR, 5DR & 6DR) 7/8"
- LIQUID LINE (ALL LENGTHS) - 3/8", LIQUID LINE w/ HOT GAS DEFROST (ALL LENGTHS) - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20" & 22"; SOLID SHELVES 18", 20" & 22"
- TOP SHELF MUST BE 20" OR SHORTER
- RECOMMENDED CONFIGURATION IS 20" SHELF AND 4 22" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

High Narrow Reach-In Back-to-Back Frozen Food/Ice Cream Merchandiser

ONRIZH - 4, 6, 8, 10 & 12-door

Electrical Data

BACK-TO-BACK CONFIGURATION ¹														
Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters (1-Phase)				Defrost Heaters ² (3-Phase)				
		120 Volts		120 Volts		208 Volts		240 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps ³	Watts	Amps ³	Watts	
ONRIZH	4-door	4	2.00	120	0.61	37	21.98	4572	25.32	6076	15.22	4572	17.52	6076
	6-door	6	3.00	180	0.92	55	24.81	5160	28.54	6850	17.18	5160	19.76	6850
	8-door	8	4.00	240	1.22	74	32.58	6776	37.78	9066	22.56	6776	26.16	9066
	10-door	10	5.00	300	1.53	92	39.79	8276	45.86	11006	27.56	8276	31.76	11006
	12-door	12	6.00	360	1.84	110	46.18	9605	53.29	12790	32.56	9605	36.92	12790
SINGLE-SIDE DATA														
ONRIZH	2-door	2	1.00	60	0.31	18	10.99	2286	12.66	3038	7.61	2286	8.76	3038
	3-door	3	1.50	90	0.46	28	12.40	2580	14.27	3425	8.59	2580	9.88	3425
	4-door	4	2.00	120	0.611	37	16.29	3388	18.89	4533	11.28	3388	13.08	4533
	5-door	5	2.50	150	0.77	46	19.89	4138	22.93	5503	13.78	4138	15.88	5503
	6-door	6	3.00	180	0.92	55	23.09	4803	26.65	6395	16.28	4803	18.46	6395

Lighting Data

BACK-TO-BACK CONFIGURATION															
Model		Fluorescent		Optimax 2 ⁴ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ⁴ LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ONRIZH	4-door	3.00	360	0.77	92	138	0.97	116	126	0.50	60	154			
	6-door	3.80	456	1.15	138	126	1.45	174	112	0.75	90	145			
	8-door	4.80	576	1.53	184	119	1.93	232	105	1.00	120	139			
	10-door	5.80	696	1.92	230	115	2.42	290	100	1.25	150	135			
	12-door	6.80	816	2.30	276	113	2.90	348	98	1.50	180	133			
SINGLE-SIDE DATA															
ONRIZH	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154			
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145			
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139			
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135			
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133			

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE
A DOVER COMPANY

High Narrow Reach-In Back-to-Back Frozen Food/Ice Cream Merchandiser

ONRIZH - 4, 6, 8, 10 & 12-door

Anti-Condensate Heater Data

BACK-TO-BACK CONFIGURATION													
Model		Anthony						Gemtron					
		101		Eliminator ⁵		Eliminator 2 ⁵		Polar		Polar LE		Polar EF	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONRIZH	4-door	8.20	985	3.57	428	2.48	297	4.78	574	3.34	402	2.38	286
	6-door	11.78	1414	5.26	631	3.62	434	7.16	860	5.00	602	3.56	428
	8-door	15.54	1864	6.92	830	4.74	568	9.54	1145	6.66	801	4.74	569
	10-door	19.23	2308	8.70	1044	5.97	716	12.00	1440	8.40	1010	6.00	720
	12-door	22.45	2694	10.40	1248	7.12	855	14.28	1715	9.96	1199	7.08	851

SINGLE-SIDE DATA													
ONRIZH	2-door	4.10	492	1.79	214	1.24	149	2.39	287	1.67	201	1.19	143
	3-door	5.89	707	2.63	315	1.81	217	3.58	430	2.50	301	1.78	214
	4-door	7.77	932	3.46	415	2.37	284	4.77	573	3.33	401	2.37	285
	5-door	9.61	1154	4.35	522	2.98	358	6.00	720	4.20	505	3.00	360
	6-door	11.23	1347	5.20	624	3.56	427	7.14	857	4.98	599	3.54	425

Guidelines & Control Settings

Model ⁶	⁸ BTUH/door (per side)	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁹ Air Velocity (FPM)
ONRIZH F - Standard	1066	-11	3-5	-3	0	460
ONRIZH C - Standard	1138	-17	3-5	-8	-5	460
ONRIZH F - Eliminator/Polar LE ⁷	966	-11	3-5	-3	0	460
ONRIZH C - Eliminator/Polar LE ⁷	983	-17	3-5	-8	-5	460

Defrost Controls

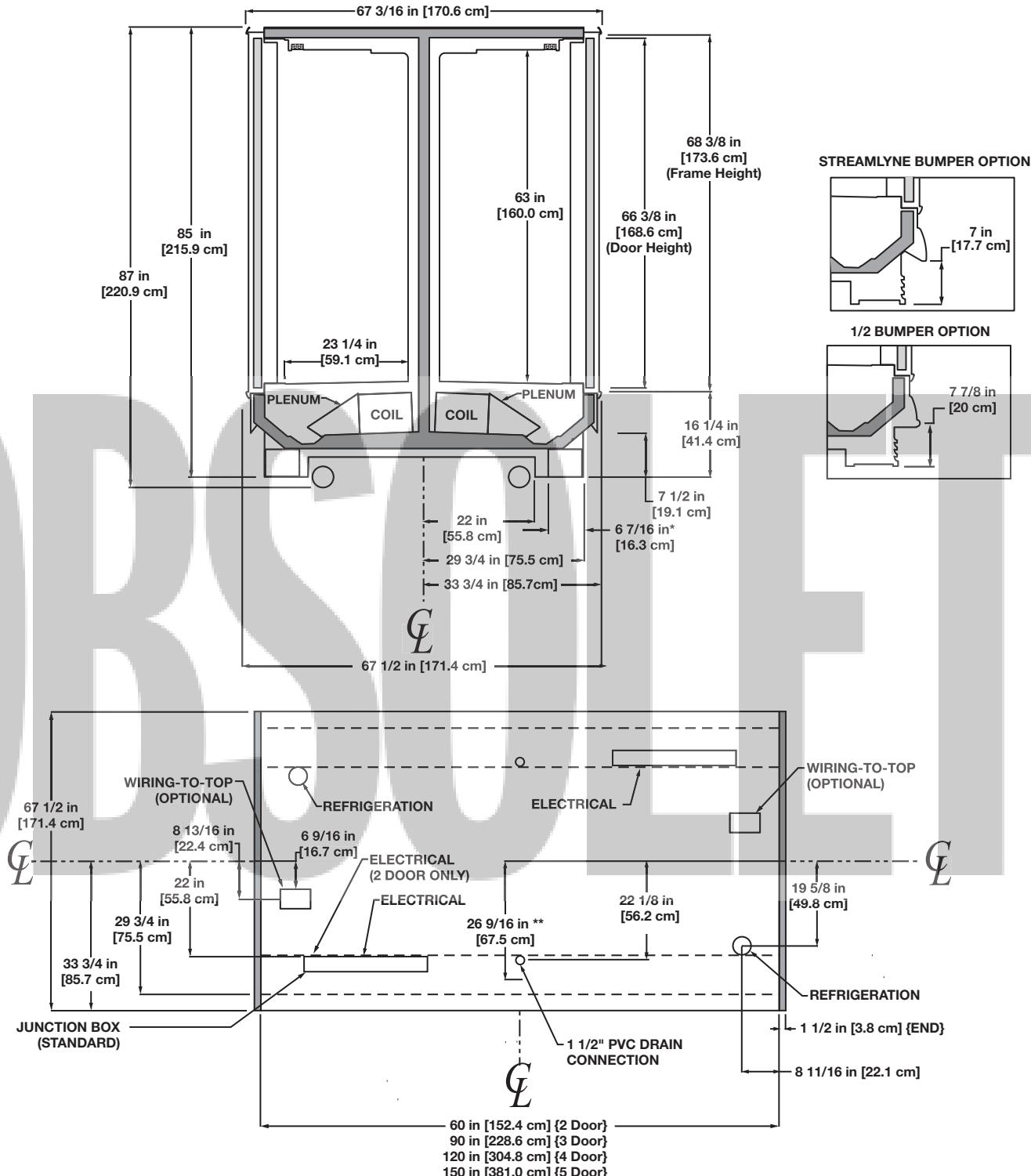
Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONRIZH	1	13-15	46	73 ¹⁰	---	---	24	73 ¹²	---	---

- 1 For back-to-back configurations, customers are required to install separate current-limiting devices for each side of the case per the amperages listed. (Current-limiting devices are available for purchase through Hill PHOENIX)
- 2 3-phase load is unbalanced.
- 3 Figure given is maximum line amperage per phase.
- 4 Low-power lights. High-power option available.
- 5 Eliminator values given for doors with no heat on the glass.
- 6 "F" = Frozen food, "C" = Ice cream.
- 7 Data given for cases with Eliminator and Polar LE Doors.
- 8 BTUH/door notes:
 - Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04. BTUHs listed are per-side/per-door.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- 9 Average discharge air velocity at peak of defrost.
- 10 The recommended location is in the center of the coil on the second pass. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.
- 11 NOTE: " --- " not an option on this case model.
- 12 The recommended location is on the dump line. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- WIRING-TO-THE-TOP- ADDS APPROXIMATELY 4 INCHES TO CASE HEIGHT
- SUCTION LINE (2DR & 3DR) 5/8", SUCTION LINE (4DR, 5DR & 6DR) 7/8"
- LIQUID LINE (ALL LENGTHS) - 3/8", LIQUID LINE w/ HOT GAS DEFROST (ALL LENGTHS) - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20" & 22"; SOLID SHELVES 18", 20" & 22"
- TOP SHELF MUST BE 20" OR SHORTER
- RECOMMENDED CONFIGURATION IS 20" SHELF AND 4 22" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

OBSOLETE

Glass Door Reach-In Back-to-Back Frozen Food/Ice Cream Merchandiser

ORIZ - 4, 6, 8, 10 & 12-door

Electrical Data

BACK-TO-BACK CONFIGURATION ¹														
Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters (1-Phase)				Defrost Heaters ² (3-Phase)				
		120 Volts		120 Volts		208 Volts		240 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps ³	Watts	Amps ³	Watts	
ORIZ	4-door	4	2.00	120	0.61	37	21.98	4572	25.32	6076	15.22	4572	17.52	6076
	6-door	6	3.00	180	0.92	55	24.81	5160	28.54	6850	17.18	5160	19.76	6850
	8-door	8	4.00	240	1.22	74	32.58	6776	37.78	9066	22.56	6776	26.16	9066
	10-door	10	5.00	300	1.53	92	39.79	8276	45.86	11006	27.56	8276	31.76	11006
	12-door	12	6.00	360	1.84	110	46.18	9605	53.29	12790	32.56	9605	36.92	12790
SINGLE-SIDE DATA														
ORIZ	2-door	2	1.00	60	0.31	18	10.99	2286	12.66	3038	7.61	2286	8.76	3038
	3-door	3	1.50	90	0.46	28	12.40	2580	14.27	3425	8.59	2580	9.88	3425
	4-door	4	2.00	120	0.611	37	16.29	3388	18.89	4533	11.28	3388	13.08	4533
	5-door	5	2.50	150	0.77	46	19.89	4138	22.93	5503	13.78	4138	15.88	5503
	6-door	6	3.00	180	0.92	55	23.09	4803	26.65	6395	16.28	4803	18.46	6395

Lighting Data

BACK-TO-BACK CONFIGURATION																	
Model		Fluorescent		Optimax 2 ⁴ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ⁴ LED		Crossfire BTUH Credit (per door)					
		120 Volts		120 Volts			120 Volts			120 Volts							
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts						
ORIZ	4-door	3.00	360	0.77	92	138	0.97	116	126	0.50	60	154					
	6-door	3.80	456	1.15	138	126	1.45	174	112	0.75	90	145					
	8-door	4.80	576	1.53	184	119	1.93	232	105	1.00	120	139					
	10-door	5.80	696	1.92	230	115	2.42	290	100	1.25	150	135					
	12-door	6.80	816	2.30	276	113	2.90	348	98	1.50	180	133					
SINGLE-SIDE DATA																	
ORIZ	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154					
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145					
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139					
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135					
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133					

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLENCE®
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Glass Door Reach-In Back-to-Back Frozen Food/Ice Cream Merchandiser

ORIZ - 4, 6, 8, 10 & 12-door

Anti-Condensate Heater Data

BACK-TO-BACK CONFIGURATION													
Model		Anthony						Gemtron					
		101		Eliminator ⁵		Eliminator 2 ⁵		Polar		Polar LE		Polar EF	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ORIZ	4-door	6.83	820	3.48	418	2.42	290	5.38	646	3.34	402	2.42	290
	6-door	9.79	1176	5.15	618	3.56	427	8.00	961	4.94	595	3.56	427
	8-door	12.73	1528	6.72	807	4.60	552	10.78	1296	6.70	808	4.86	584
	10-door	15.70	1884	8.43	1012	5.77	693	13.34	1602	8.24	992	5.94	712
	12-door	18.67	2241	10.13	1215	6.93	832	16.00	1922	9.88	1190	7.12	854

SINGLE-SIDE DATA													
ORIZ	2-door	3.42	410	1.74	209	1.21	145	2.69	323	1.67	201	1.21	145
	3-door	4.90	588	2.58	309	1.78	213	4.00	480	2.47	297	1.78	213
	4-door	6.37	764	3.36	403	2.30	276	5.39	648	3.35	404	2.43	292
	5-door	7.85	942	4.22	506	2.89	346	6.67	801	4.12	496	2.97	356
	6-door	9.34	1121	5.06	607	3.47	416	8.00	961	4.94	595	3.56	427
	8-door	11.82	1300	6.83	799	3.99	586	10.38	1122	5.67	693	4.38	584

Guidelines & Control Settings

Model ⁶	⁸ BTUH/door (per side)	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁹ Air Velocity (FPM)
ORIZ F - Standard	1066	-11	3-5	-3	0	460
ORIZ: c - Standard	1138	-17	3-5	-8	-5	460
ORIZ F - Eliminator/Polar LE ⁷	966	-11	3-5	-3	0	460
ORIZ C - Eliminator/Polar LE ⁷	983	-17	3-5	-8	-5	460

Defrost Controls

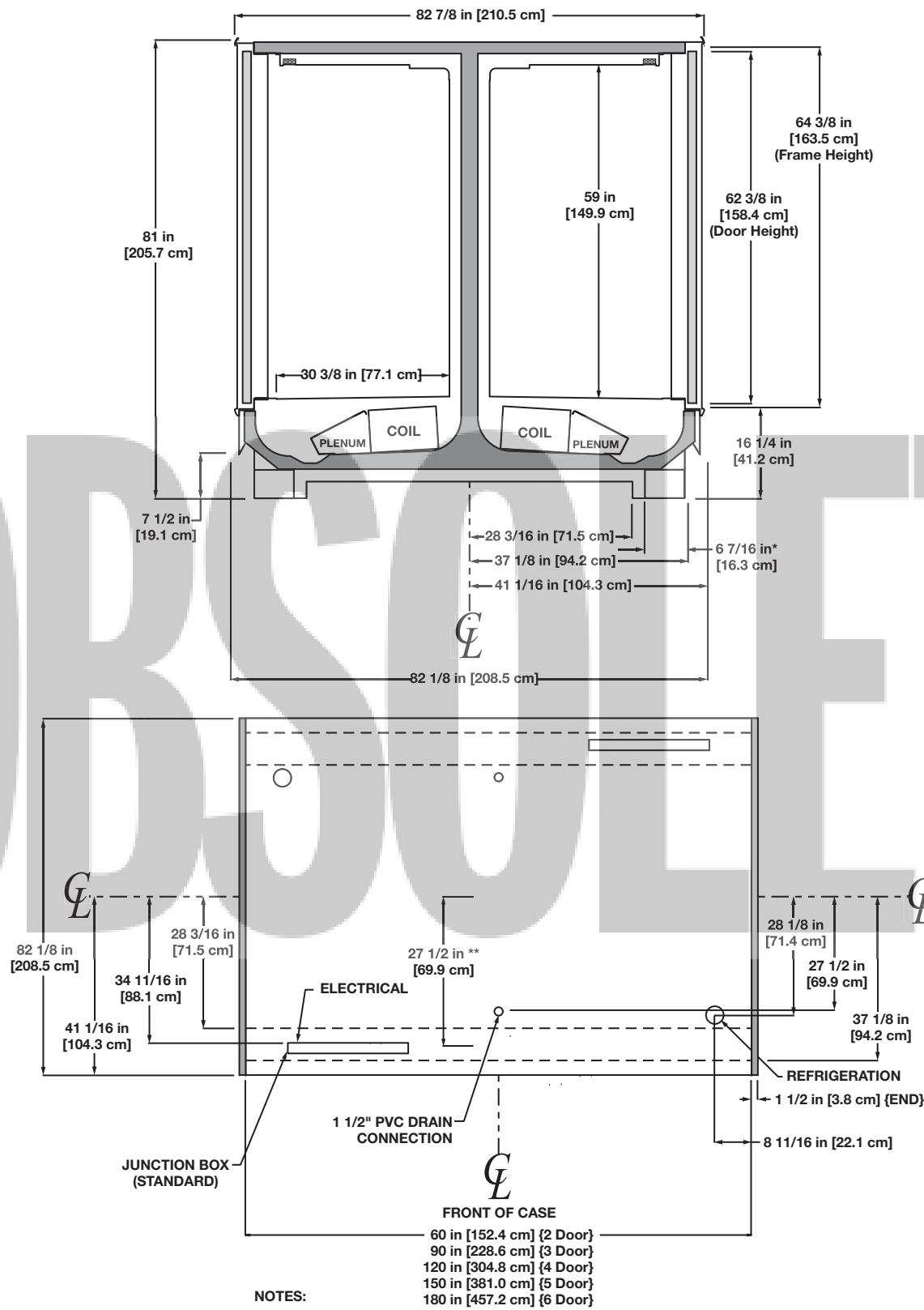
Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ORIZ	1	13-15	46	73 ¹⁰	---	---	24	73 ¹²	---	---

- 1 For back-to-back configurations, customers are required to install separate current-limiting devices for each side of the case per the amperages listed. (Current-limiting devices are available for purchase through Hill PHOENIX)
- 2 3-phase load is unbalanced.
- 3 Figure given is maximum line amperage per phase.
- 4 Low-power lights. High-power option available.
- 5 Eliminator values given for doors with no heat on the glass.
- 6 "F" = Frozen food, "C" = Ice cream.
- 7 Data given for cases with Eliminator and Polar LE Doors.
- 8 BTUH/door notes:
- Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04. BTUHs listed are per-side/per-door.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
- 9 Average discharge air velocity at peak of defrost.
- 10 The recommended location is in the center of the coil on the second pass. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.
- 11 NOTE: "---" not an option on this case model.
- 12 The recommended location is on the dump line. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20", 22" & 23 1/2"; SOLID SHELVES 18", 20", 22", 24" & 27"
- TOP SHELF MUST BE 24" OR SHORTER WHEN USING 27" SHELVES
- RECOMMENDED CONFIGURATION IS 1 - 24" SHELF AND 4 - 27" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

OBSOLETE

Glass Door Reach-In Back-to-Back Frozen Food/Ice Cream Merchandiser

ORIZH - 4, 6, 8, 10 & 12-door

Electrical Data

BACK-TO-BACK CONFIGURATION ¹														
Model	Fans per Case	Standard Fans		High Efficiency Fans		Defrost Heaters (1-Phase)				Defrost Heaters ² (3-Phase)				
		120 Volts		120 Volts		208 Volts		240 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps ³	Watts	Amps ³	Watts	
ORIZH	4-door	4	2.00	120	0.61	37	21.98	4572	25.32	6076	15.22	4572	17.52	6076
	6-door	6	3.00	180	0.92	55	24.81	5160	28.54	6850	17.18	5160	19.76	6850
	8-door	8	4.00	240	1.22	74	32.58	6776	37.78	9066	22.56	6776	26.16	9066
	10-door	10	5.00	300	1.53	92	39.79	8276	45.86	11006	27.56	8276	31.76	11006
	12-door	12	6.00	360	1.84	110	46.18	9605	53.29	12790	32.56	9605	36.92	12790
SINGLE-SIDE DATA														
ORIZH	2-door	2	1.00	60	0.31	18	10.99	2286	12.66	3038	7.61	2286	8.76	3038
	3-door	3	1.50	90	0.46	28	12.40	2580	14.27	3425	8.59	2580	9.88	3425
	4-door	4	2.00	120	0.611	37	16.29	3388	18.89	4533	11.28	3388	13.08	4533
	5-door	5	2.50	150	0.77	46	19.89	4138	22.93	5503	13.78	4138	15.88	5503
	6-door	6	3.00	180	0.92	55	23.09	4803	26.65	6395	16.28	4803	18.46	6395

Lighting Data

BACK-TO-BACK CONFIGURATION															
Model		Fluorescent		Optimax 2 ⁴ LED		Optimax 2 BTUH Credit (per door)	Gen 3 LED		Gen 3 BTUH Credit (per door)	Crossfire ⁴ LED		Crossfire BTUH Credit (per door)			
		120 Volts		120 Volts			120 Volts			120 Volts					
		Amps	Watts	Amps	Watts		Amps	Watts		Amps	Watts				
ORIZH	4-door	3.00	360	0.77	92	138	0.97	116	126	0.50	60	154			
	6-door	3.80	456	1.15	138	126	1.45	174	112	0.75	90	145			
	8-door	4.80	576	1.53	184	119	1.93	232	105	1.00	120	139			
	10-door	5.80	696	1.92	230	115	2.42	290	100	1.25	150	135			
	12-door	6.80	816	2.30	276	113	2.90	348	98	1.50	180	133			
SINGLE-SIDE DATA															
ORIZH	2-door	1.50	180	0.38	46	138	0.48	58	126	0.26	30	154			
	3-door	1.90	228	0.58	69	126	0.73	87	112	0.38	45	145			
	4-door	2.40	288	0.77	92	119	0.97	116	105	0.50	60	139			
	5-door	2.90	348	0.96	115	115	1.21	145	100	0.63	75	135			
	6-door	3.40	408	1.15	138	113	1.45	174	98	0.75	90	133			

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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Glass Door Reach-In Back-to-Back Frozen Food/Ice Cream Merchandiser

ORIZH - 4, 6, 8, 10 & 12-door

Anti-Condensate Heater Data

BACK-TO-BACK CONFIGURATION													
Model		Anthony						Gemtron					
		101		Eliminator ⁵		Eliminator 2 ⁵		Polar		Polar LE		Polar EF	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ORIZH	4-door	8.20	985	3.57	428	2.48	297	4.78	574	3.34	402	2.38	286
	6-door	11.78	1414	5.26	631	3.62	434	7.16	860	5.00	602	3.56	428
	8-door	15.54	1864	6.92	830	4.74	568	9.54	1145	6.66	801	4.74	569
	10-door	19.23	2308	8.70	1044	5.97	716	12.00	1440	8.40	1010	6.00	720
	12-door	22.45	2694	10.40	1248	7.12	855	14.28	1715	9.96	1199	7.08	851

SINGLE-SIDE DATA													
ORIZH	2-door	4.10	492	1.79	214	1.24	149	2.39	287	1.67	201	1.19	143
	3-door	5.89	707	2.63	315	1.81	217	3.58	430	2.50	301	1.78	214
	4-door	7.77	932	3.46	415	2.37	284	4.77	573	3.33	401	2.37	285
	5-door	9.61	1154	4.35	522	2.98	358	6.00	720	4.20	505	3.00	360
	6-door	11.23	1347	5.20	624	3.56	427	7.14	857	4.98	599	3.54	425

Guidelines & Control Settings

Model ⁶	⁸ BTUH/door (per side)	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁹ Air Velocity (FPM)
ORIZH F - Standard	1066	-11	3-5	-3	0	460
ORIZH c - Standard	1138	-17	3-5	-8	-5	460
ORIZH F - Eliminator/Polar LE ⁷	966	-11	3-5	-3	0	460
ORIZH c - Eliminator/Polar LE ⁷	983	-17	3-5	-8	-5	460

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ORIZH	1	13-15	46	73 ¹⁰	---	---	24	73 ¹²	---	---

1 For back-to-back configurations, customers are required to install separate current-limiting devices for each side of the case per the amperages listed. (Current-limiting devices are available for purchase through Hill PHOENIX)

2 3-phase load is unbalanced.

3 Figure given is maximum line amperage per phase.

4 Low-power lights. High-power option available.

5 Eliminator values given for doors with no heat on the glass.

6 "F" = Frozen food, "C" = Ice cream.

7 Data given for cases with Eliminator and Polar LE Doors.

8 BTUH/door notes:

- Listed BTUH/door indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04. BTUHs listed are per-side/per-door.
- Standard fans increase refrigeration load by 96 BTUH/fan.

9 Average discharge air velocity at peak of defrost.

10 The recommended location is in the center of the coil on the second pass. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

11 NOTE: "---" not an option on this case model.

12 The recommended location is on the dump line. If using a discharge air temperature to terminate defrost, utilize a 55°F termination temp.

REACH-IN

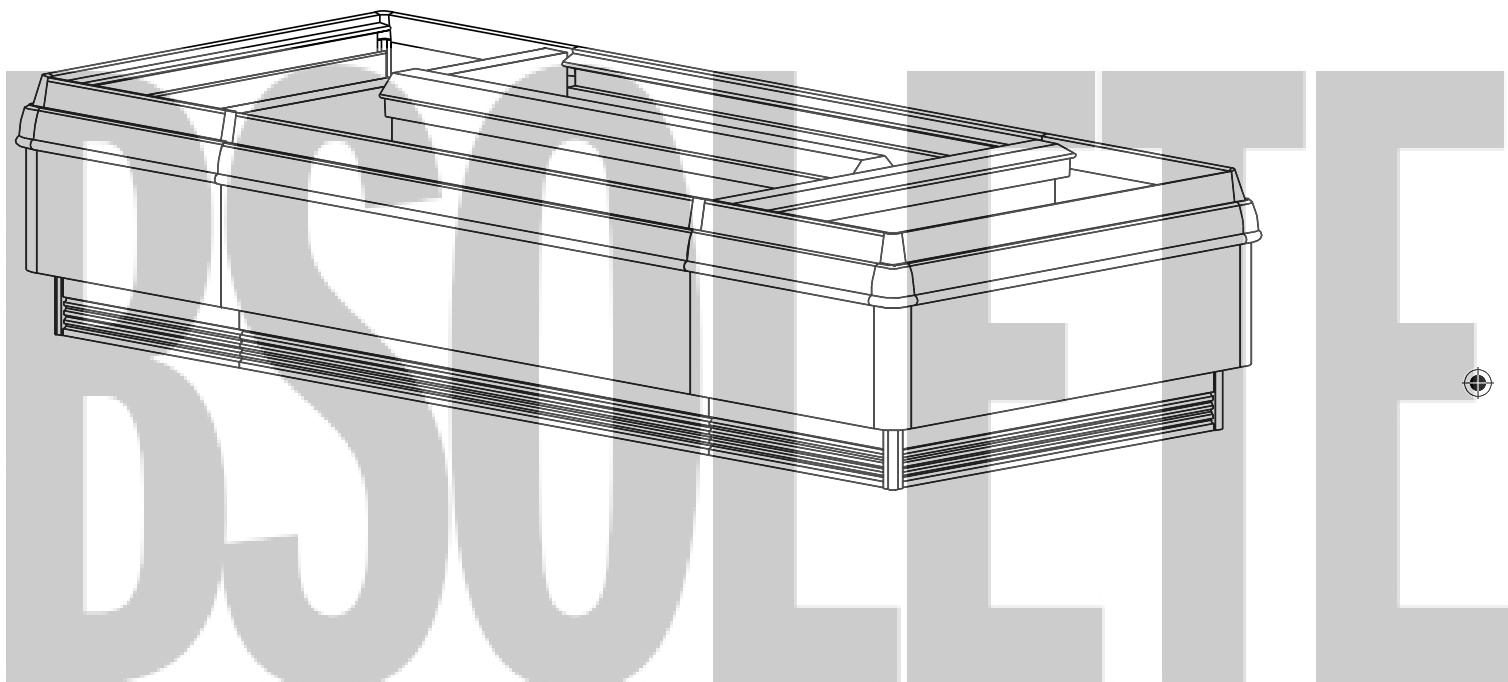
Frozen Food/Ice Cream

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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SINGLE DECK ISLAND



NOTES

- Cases shown with an ANSI/NSF* mark are listed by NSF.
- Cases shown with a UL * mark are listed by Underwriters Laboratories Inc.
- Allow for an extra 1/8" per joint when lining up merchandisers.
- Technical information contained herein is subject to change without notice.

* ANSI - American National Standard Institute
NSF - National Sanitation Foundation
UL - Underwriters Laboratories Inc

Narrow Island Deli/Meat Merchandiser

ONIM - 8' & 12' double wraparound ends

ONIMB - 8' & 12' single wraparound end

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONIM	8'	6	2.04	102	0.90	66	0.82	98	4.34	902	5.00
	12'	8	2.72	136	1.20	88	1.08	130	7.22	1502	8.33
ONIMB	8'	6	2.04	102	0.90	66	0.75	90	4.34	902	5.00
	12'	8	2.72	136	1.20	88	1.17	140	7.22	1502	8.33

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)						
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			120 Volts		120 Volts		120 Volts		
ONIM	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6
ONIMB	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ¹	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
ONIM Meat	821	6-8	12	25	34	180
ONIMB Deli	796	6-8	17	28	37	180

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONIM ONIMB	3	6-8	35	47	45	47	26	45	---	---

1 For "Meat" application, add 400 BTUH for each wraparound end; for "Deli" application, add 250 BTUH for each wraparound end.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

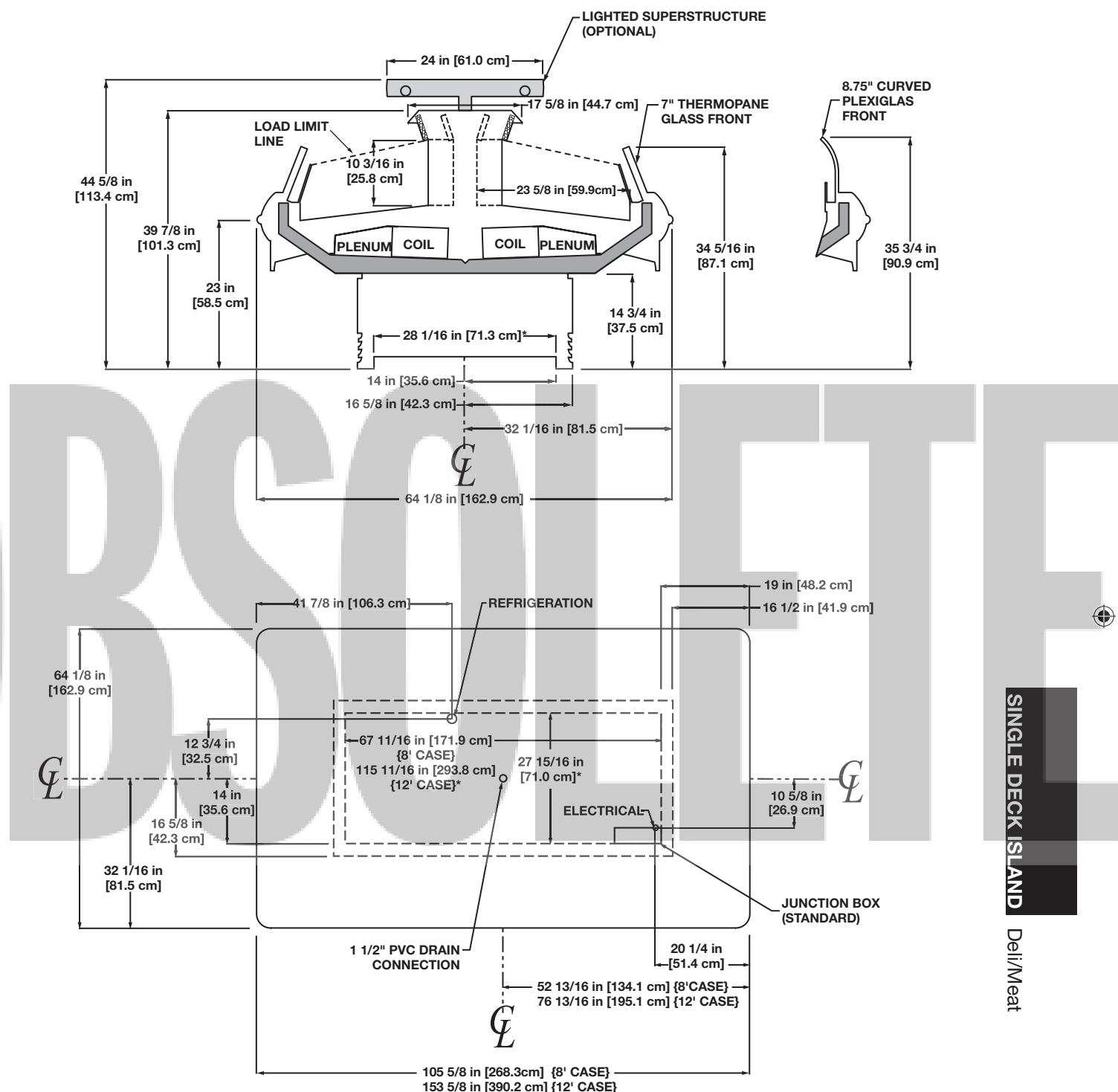
4 NOTE: "---" not an option on this case model.

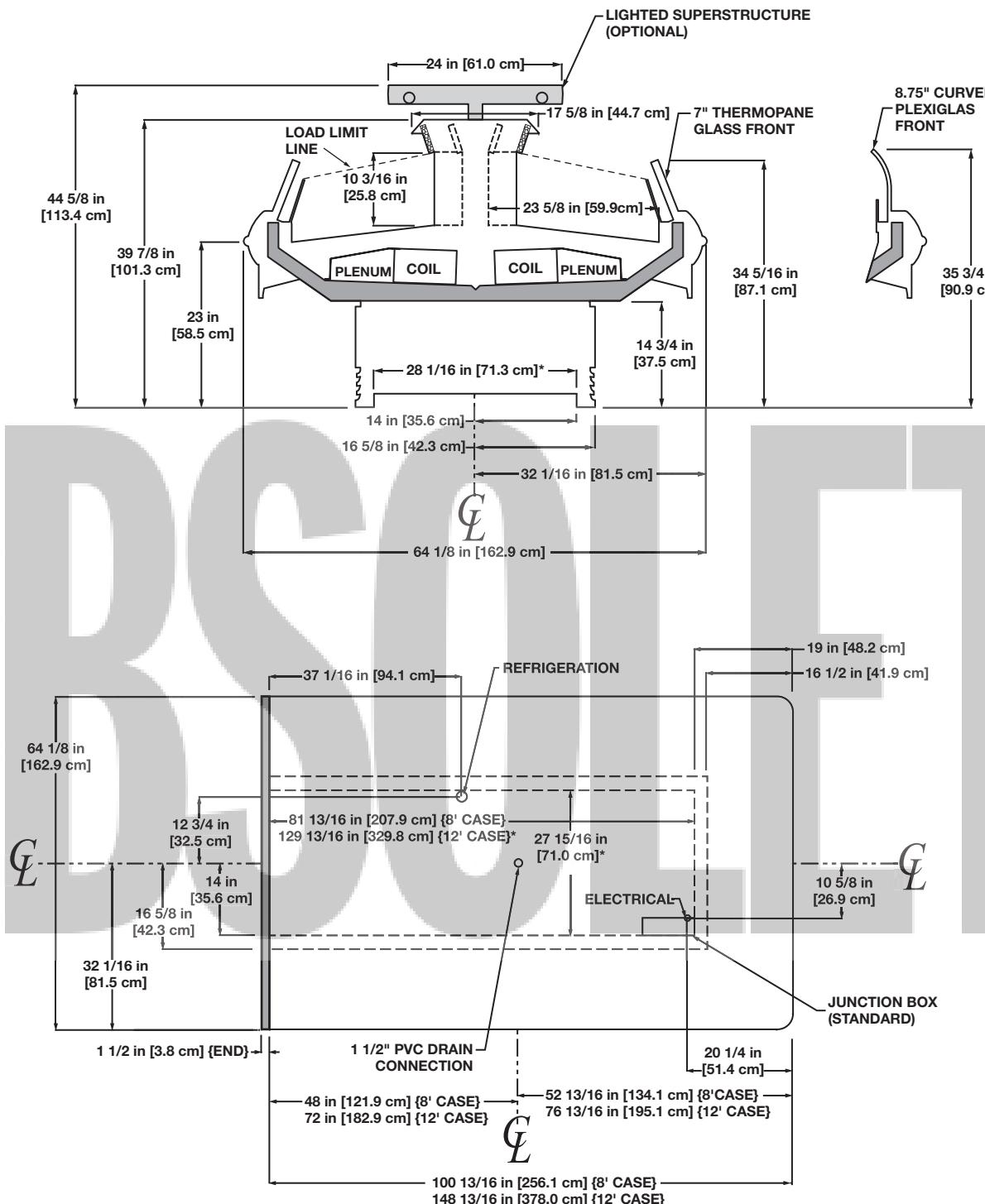
Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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NOTES:

* STUB-UP AREA

- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Narrow Island Self-Contained Deli/Meat Merchandiser

ONIMA - 8' & 12'

System Requirements

Model	Volts	Phase	Hz	Wire	Minimum Circuit Ampacity	Maximum Overcurrent Protection
ONIMA	8'	208	1	60	3 wire + ground	19.325
	12'	208	1	60	3 wire + ground	23.343

Electrical Data

Model	Fans per Case	Standard Fans		Condenser Fans		Anti-Condensate Heater		Defrost Heaters				Drain Heater		Maximum Lights		
		120 Volts		120 Volts		120 Volts		208 Volts		204 Volts		120 Volts		120 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ONIMA	8'	6	2.04	102	0.85	88	0.82	98	4.34	902	5.00	1200	4.81	1000	1.26	151
	12'	8	2.72	136	2.60	270	1.08	130	7.22	1502	8.33	2000	4.81	1000	1.46	175

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
ONIMA	8'	35	6-8	25	34	180
	12'	35	6-8	25	34	180

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ³ (amps)	LRA ⁴ (amps)	Refrig.	Lbs. of Refrig.
ONIMA	8'	208	1	60	1	10.36	48.2	R22
	12' ²	208	1	60	2	14.0	68.4	R22

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONIMA	3	35	47	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 This case uses two condensing units.

3 RLA = Running Load Amps

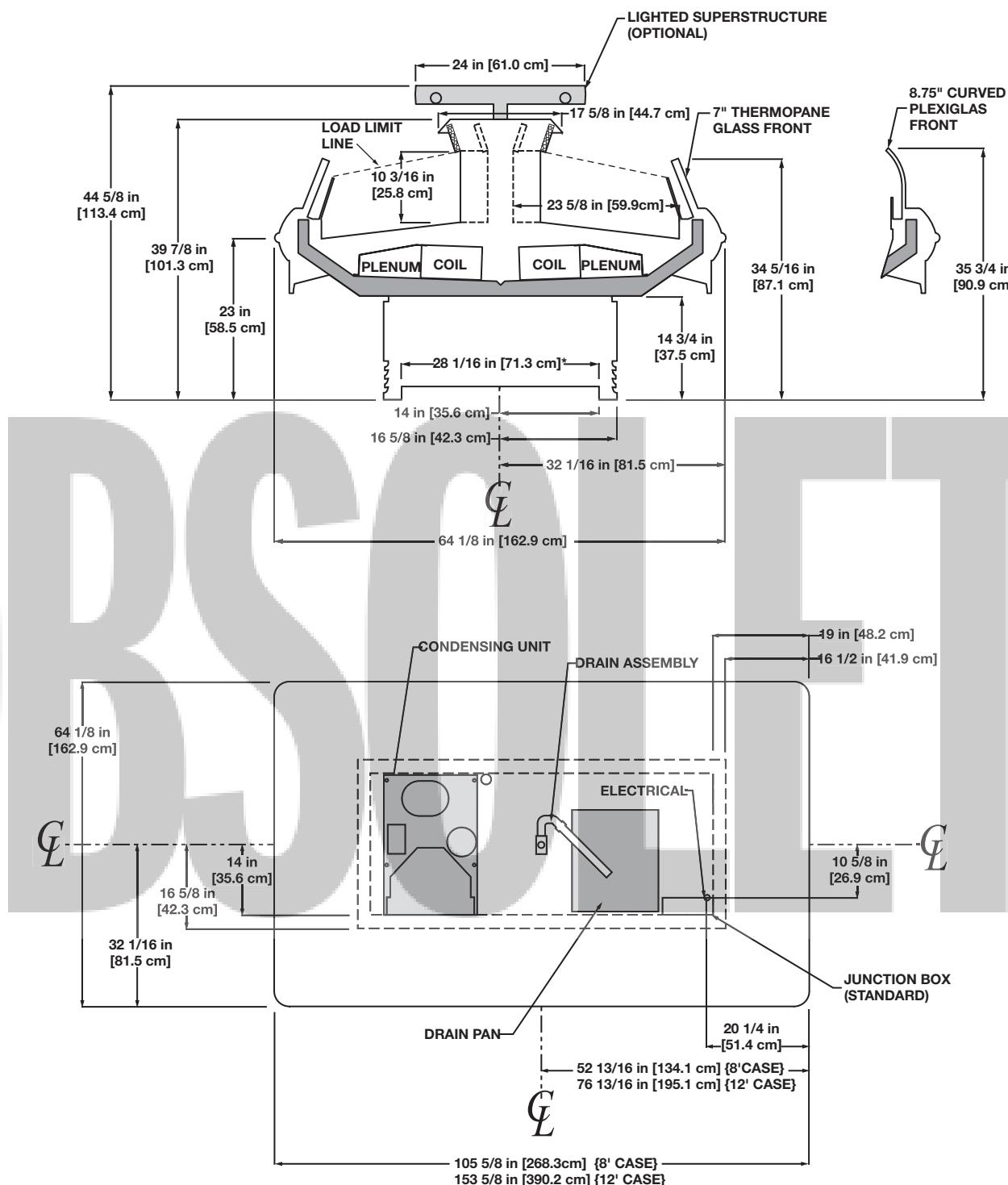
4 LRA = Locked Rotor Amps

4 NOTE: "---" not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.





SINGLE DECK ISLAND Deli/Meat

NOTES:

* STUB-UP AREA



Narrow Island Self-Contained Deli/Meat Merchandiser

ONIMBA - 8' & 12'

System Requirements

Model		Volts	Phase	Hz	Wire	Minimum Circuit Ampacity	Maximum Overcurrent Protection
ONIMBA	8'	208	1	60	3 wire + ground	17.999	35
	12'	208	1	60	3 wire + ground	26.619	40

Electrical Data

Model	Fans per Case	Standard Fans		Condenser Fans		Anti-Condensate Heater		Defrost Heaters				Drain Heater	
		120 Volts		120 Volts		120 Volts		208 Volts		204 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONIMBA	8'	2.04	102	0.85	88	0.75	90	4.34	902	5.00	1200	4.81	1000
	12'	2.72	136	2.60	270	1.23	148	7.22	1502	8.33	2000	4.81	1000

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge Air Velocity ¹ (FPM)
ONIMBA	8'	35	6-8	25	34	180
	12'			25	34	180

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ³ (amps)	LRA ⁴ (amps)	Refrig.	Lbs. of Refrig.
ONIMBA	8'	208	1	60	1	10.36	48.2	R22
	12' ²	208	1	60	2	14.0	68.4	R22

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONIMBA	3	35	47	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 This case uses two condensing units.

3 RLA = Running Load Amps

4 LRA = Locked Rotor Amps

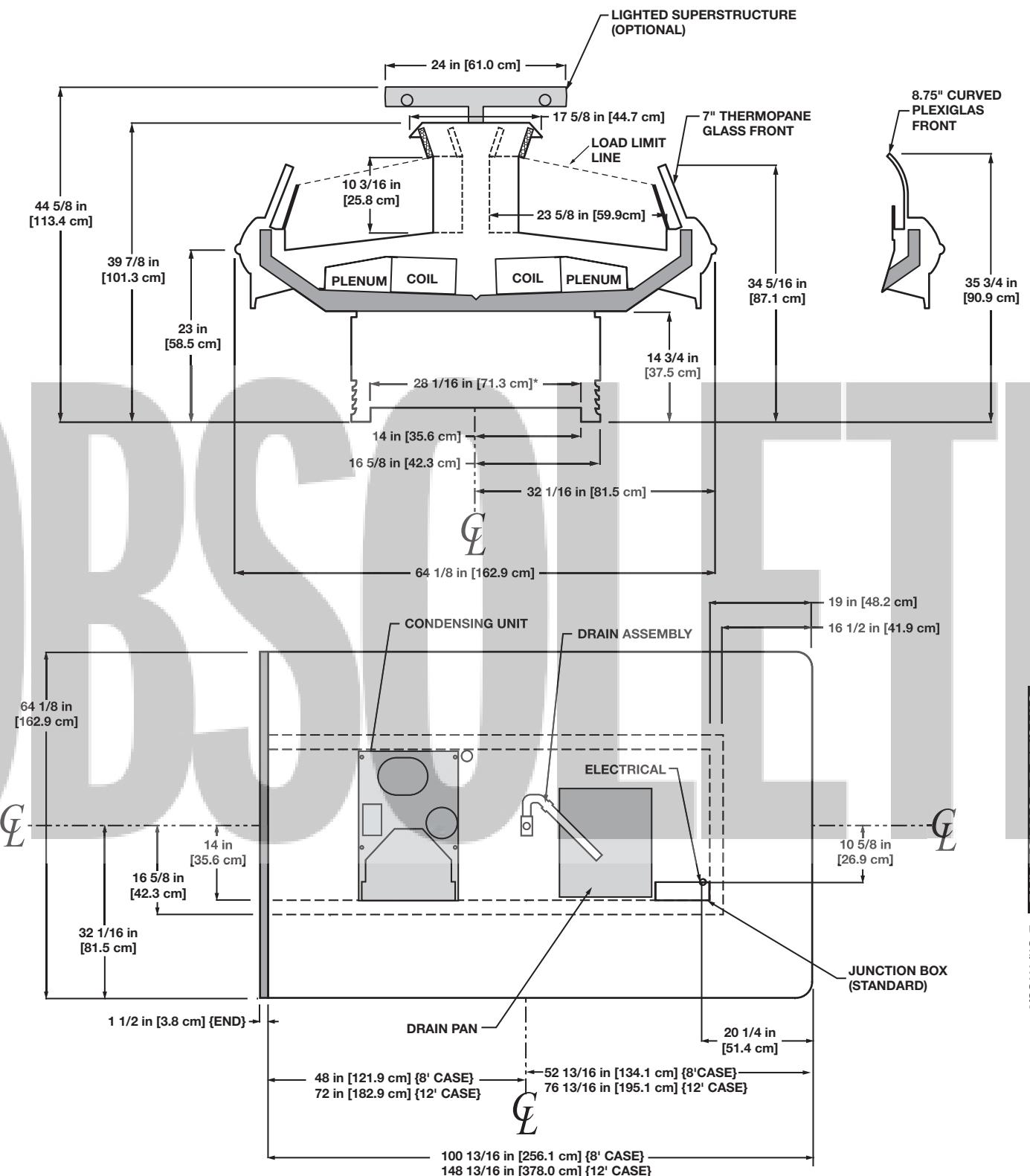
5 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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SINGLE DECK ISLAND Deli/Meat



Wide Island Deli/Meat Merchandiser

OIM - 8' & 12' double wraparound ends

OIMB - 6', 8' & 12' single wraparound end

OIMBB - 8' & 12' double joint ends

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OIM	8'	6	2.04	102	0.90	66	0.82	98	4.34	902	5.00
	12'	8	2.72	136	1.20	88	1.08	130	7.22	1502	8.33
OIMB	6'	4	1.36	76	0.60	44	0.57	68	3.25	676	3.75
	8'	6	2.04	102	0.90	66	0.82	98	4.34	902	5.00
	12'	8	2.72	136	1.20	88	1.08	130	7.22	1502	8.33
OIMBB	8'	6	2.04	102	0.90	66	0.75	90	4.34	902	5.00
	12'	8	2.72	136	1.20	88	1.17	140	7.22	1502	8.33

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)						
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			120 Volts		120 Volts		120 Volts		
			Amps	Watts	Amps	Watts	Amps	Watts	
OIM	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6
OIMB	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6
OIMBB	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ¹	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ³ Air Velocity (FPM)
OIM/-B/-BB Meat	706	6-8	12	26	31	140
OIM/-B/-BB Deli	496	6-8	17	28	33	140

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OIM/-B/-BB	3	6-8	40	47	45	47	26	45	---	---

1 For "Meat" application, add 400 BTUH for each wraparound end; for "Deli" application, add 250 BTUH for each wraparound end.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

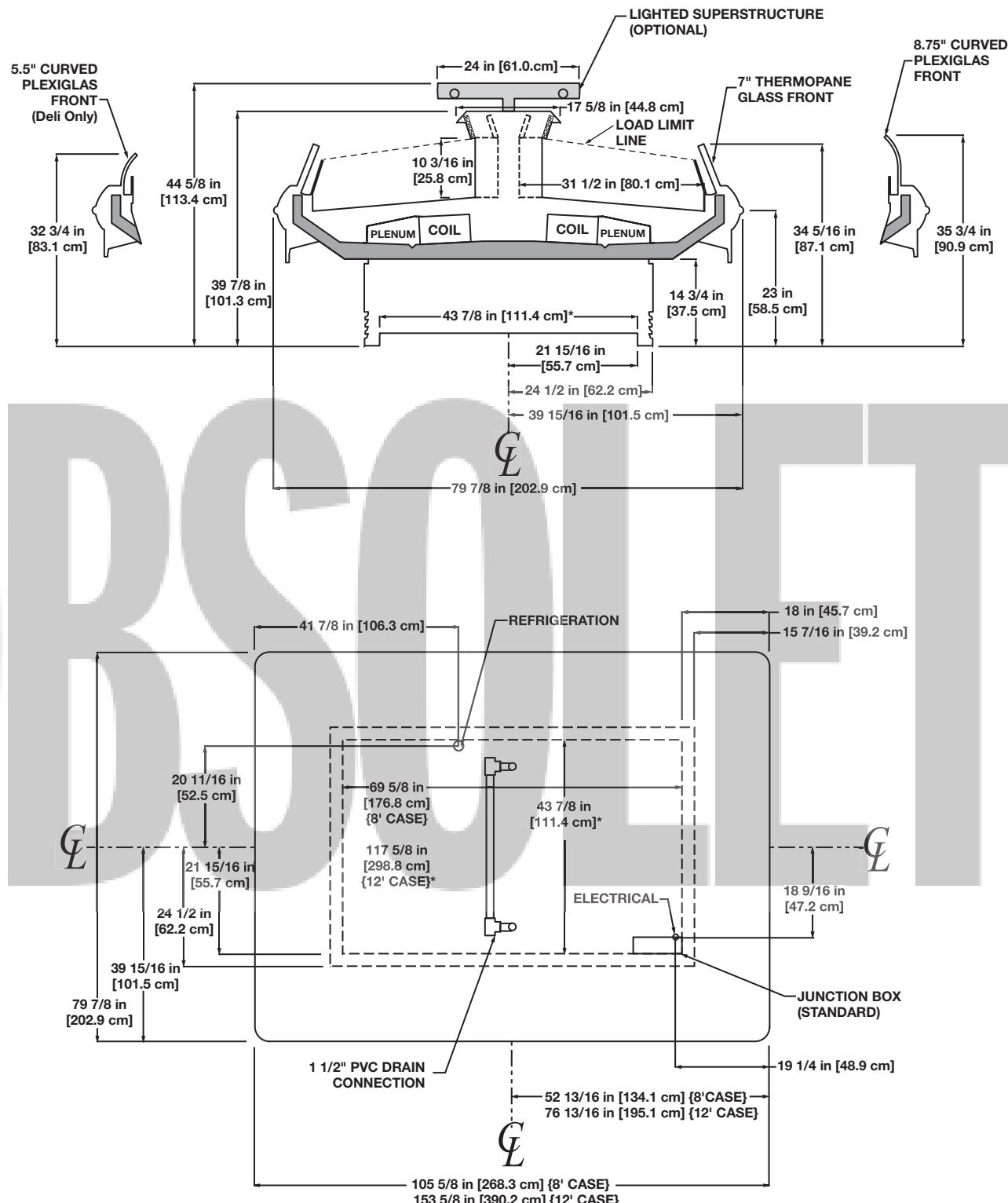
3 Average discharge air velocity at peak of defrost.

4 NOTE: "---" not an option on this case model.

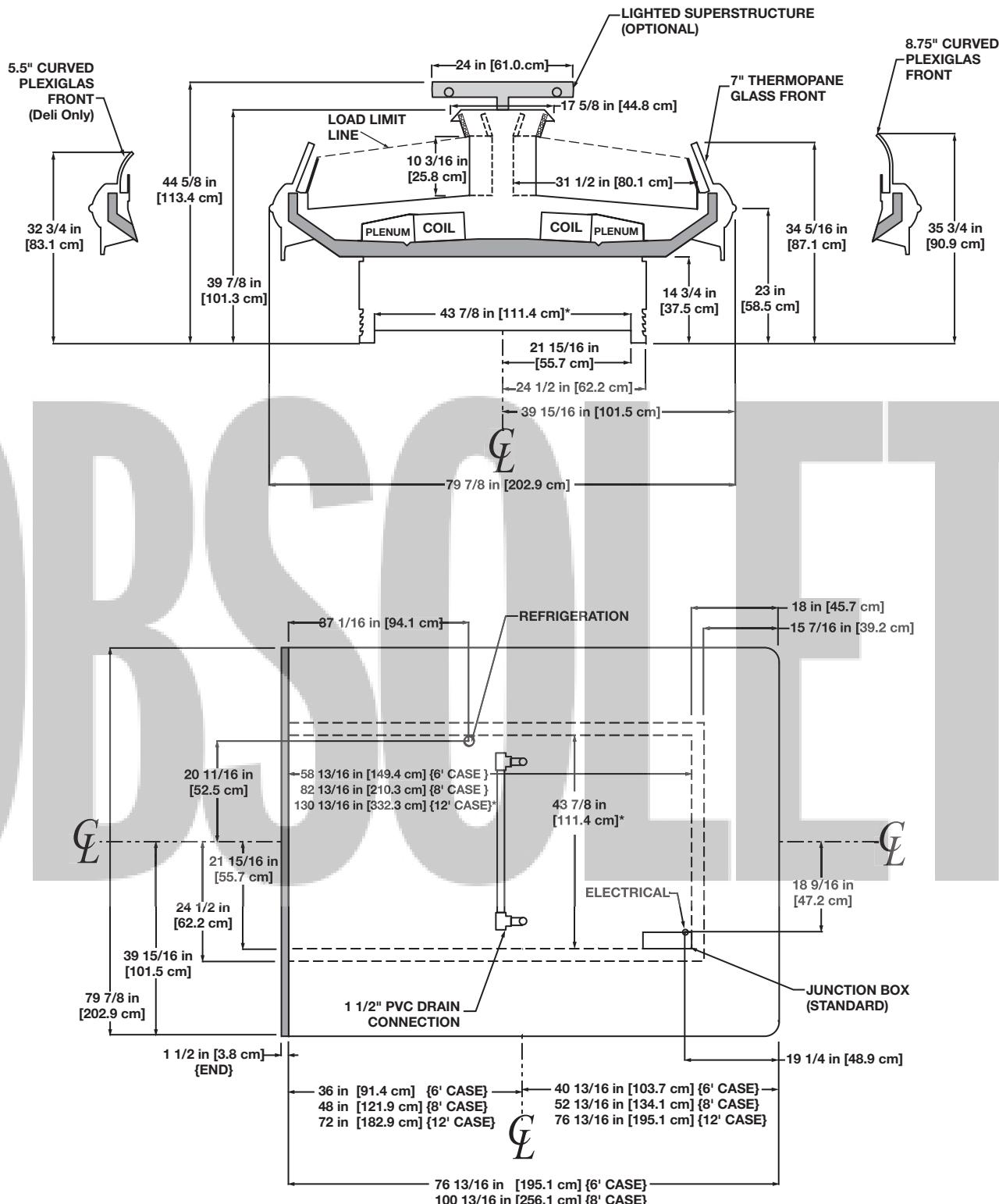
All measurements are taken per ARI 1200 - 2002 specifications.

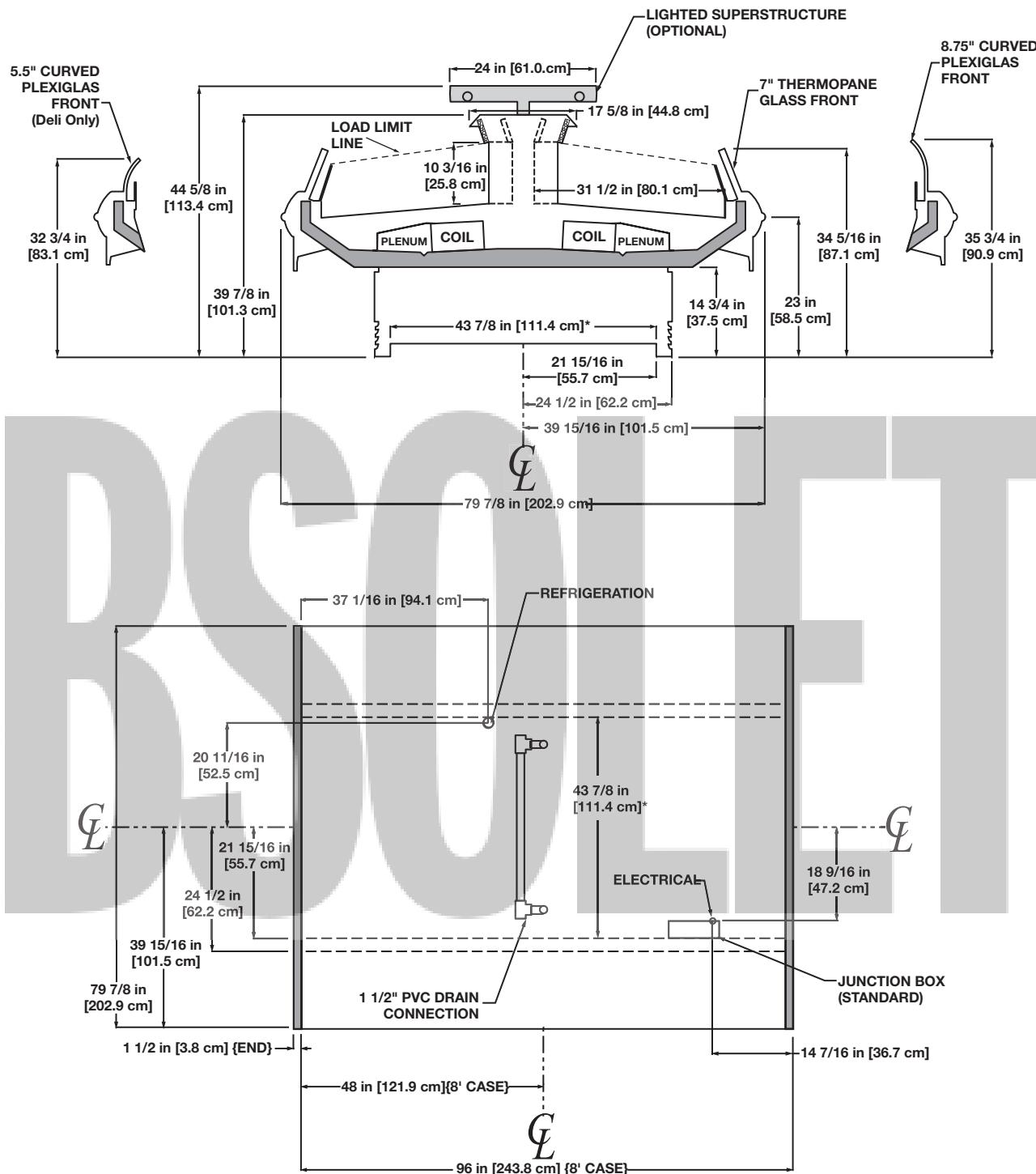


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SINGLE DECK ISLAND
Deli/Meat





Wide Island Self-Contained Deli/Meat Merchandiser

OIMA - 8' & 12'

System Requirements

Model	Volts	Phase	Hz	Wire	Minimum Circuit Ampacity	Maximum Overcurrent Protection
OIMA	8'	208	1	60	3 wire + ground	23.655
	12'	208	1	60	3 wire + ground	28.435

Electrical Data

Model	Fans per Case	Standard Fans		Condenser Fans		Anti-Condensate Heater		Defrost Heaters				Drain Heater		Maximum Lights	
		120 Volts		120 Volts		120 Volts		208 Volts		204 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OIMA	8'	2.04	102	0.85	88	0.71	85	4.34	902	5.00	1200	4.81	1000	5.04	606
	12'	2.72	136	2.60	270	0.79	95	7.22	1502	8.33	2000	4.81	1000	6.50	780

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
OIMA	8'	35	6-8	26	31	140
	12'	35	6-8	26	31	140

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ³ (amps)	LRA ⁴ (amps)	Refrig.	Lbs. of Refrig.
OIMA	208	1	60	1	10.36	48.2	R22	8.2
	208	1	60	2	14.0	68.4	R22	12.6

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OIMA	3	40	47	---	5	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 This case uses two condensing units.

3 RLA = Running Load Amps

4 LRA = Locked Rotor Amps

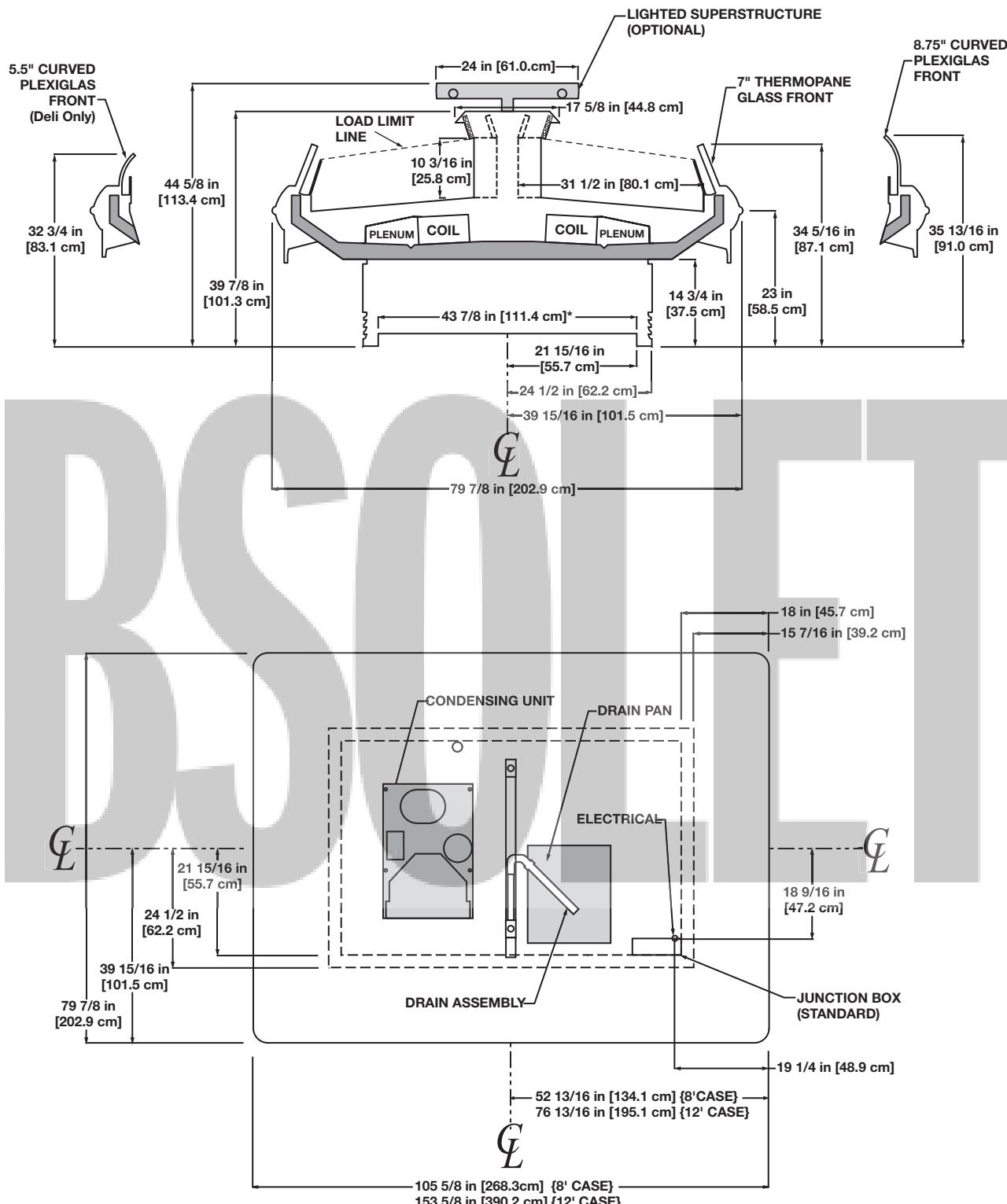
5 NOTE: " - - - " not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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SINGLE DECK ISLAND Deli/Meat


Wide Island Self-Contained Deli/Meat Merchandiser

OIMBA - 6' & 12'

System Requirements

Model		Volts	Phase	Hz	Wire	Minimum Circuit Ampacity	Maximum Overcurrent Protection
OIMBA	6'	208	1	60	3 wire + ground	17.047	30
	12'	208	1	60	3 wire + ground	26.619	45

Electrical Data

Model	Fans per Case	Standard Fans		Condenser Fans		Anti-Condensate Heater		Defrost Heaters				Drain Heater		Maximum Lights		
		120 Volts		120 Volts		120 Volts		208 Volts		204 Volts		120 Volts		120 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OIMBA	6'	4	1.36	76	2.60	270	0.57	68	3.25	676	3.75	900	7.21	1500	1.26	151
	12'	8	2.72	136	2.60	270	1.23	148	7.22	1502	8.33	2000	7.21	1500	1.46	175

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
OIMBA	6'	35	6-8	26	31	140
	12'	35	6-8	26	31	140

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ³ (amps)	LRA ⁴ (amps)	Refrig.	Lbs. of Refrig.
OIMBA	6'	208	1	60	1	7	R22	8.2
	12' ²	208	1	60	2	14.0	68.4	R22

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OIMBA	3	40	47	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 This case uses two condensing units.

3 RLA = Running Load Amps

4 LRA = Locked Rotor Amps

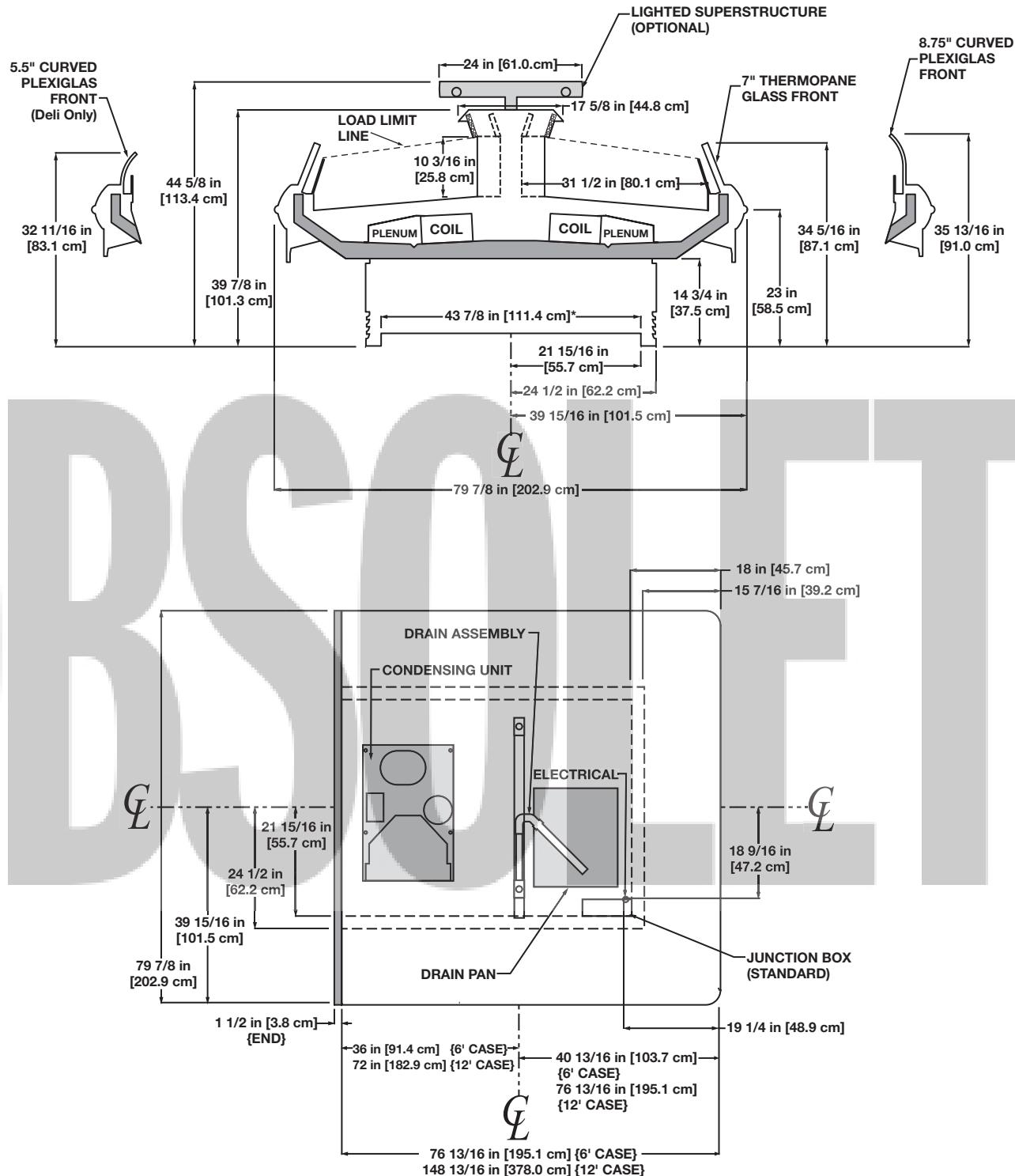
5 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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**NOTES:**

* STUB-UP AREA

• DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Narrow Island Bulk Produce Merchandiser

ONIP - 8' & 12' narrow island double wraparound end

ONIPB - 6', 8', 10' & 12' narrow island single wraparound end

ONIPBB - 8' & 12' narrow island double joint

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONIP	8'	6	2.04	102	0.90	66	0.23	28	---	---	---
	12'	8	2.72	136	1.20	88	0.55	66	---	---	---
ONIPB	4'	4	1.36	76	0.60	44	0.31	37	---	---	---
	6'	4	2.04	102	0.90	66	0.46	55	---	---	---
	8'	6	2.04	102	0.90	66	0.66	79	---	---	---
	12'	8	2.72	136	1.20	88	0.78	94	---	---	---
ONIPBB	8'	6	2.04	102	0.90	66	0.84	101	---	---	---
	12'	8	2.72	136	1.20	88	1.26	151	---	---	---

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ONIP/-B/-BB	586	6-8	22	34	48	140

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONIP/-B/-BB	3	6-8	---	---	44	38	---	---	---	---

1 NOTE: "---" not an option on this case model.

2 For ONIP, add 600 BTUH for each wraparound end.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.10.

- Standard fans increase refrigeration load by 96 BTUH/fan.

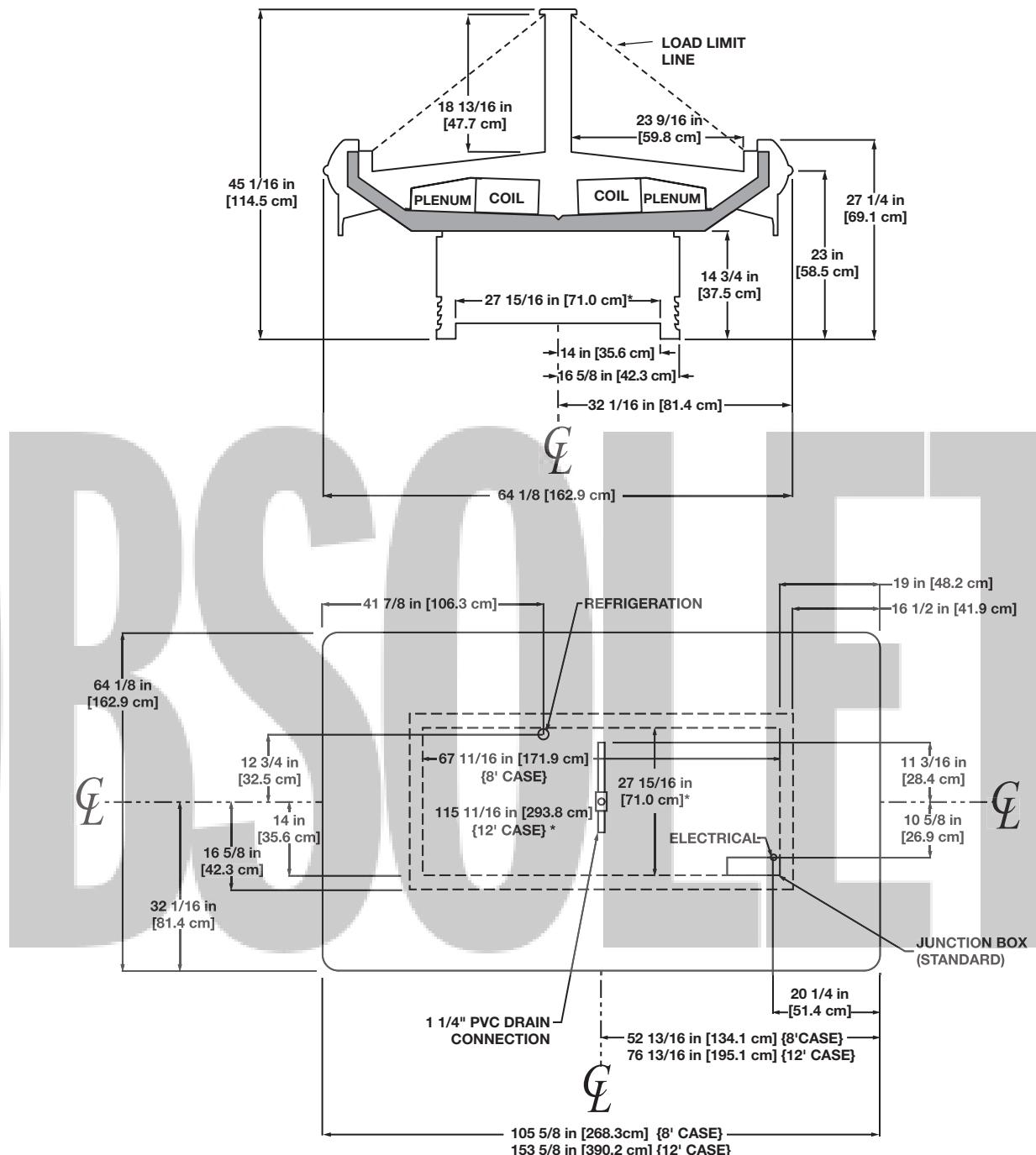
4 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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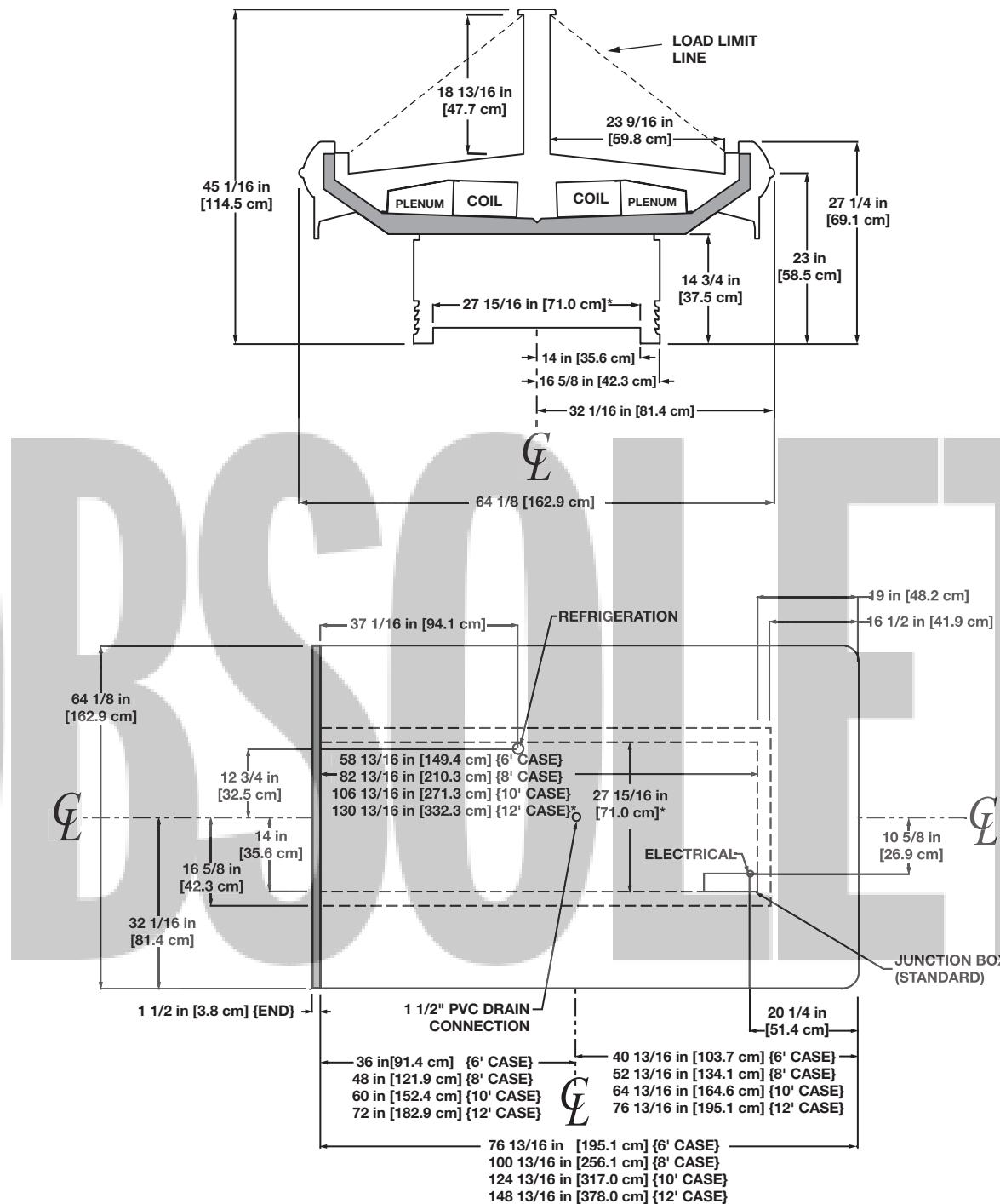
SINGLE DECK ISLAND Bulk Produce

NOTES:

* STUB-UP AREA

- SUCTION LINE - 7/8", LIQUID LINE - 1/2"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



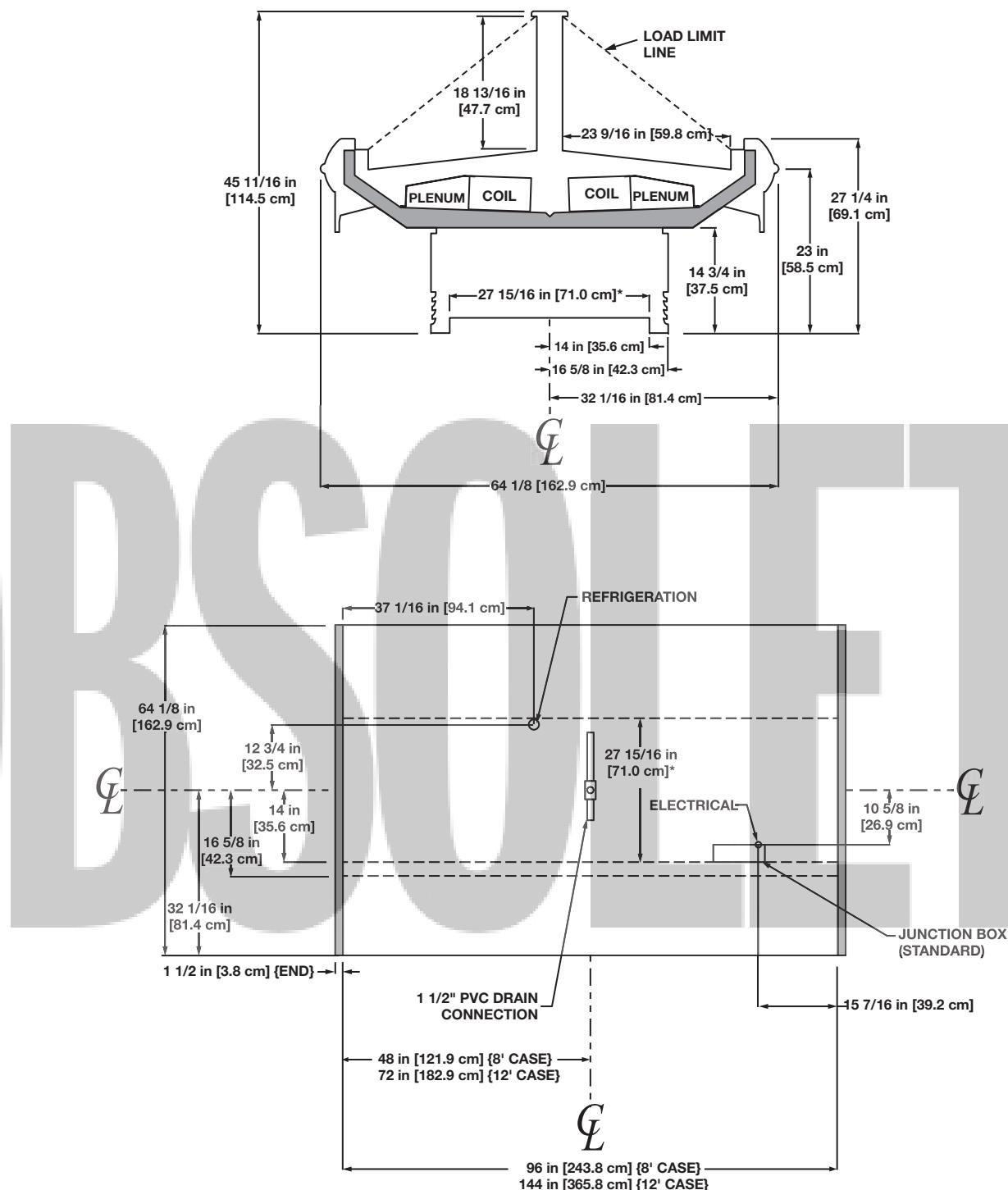


NOTES:

* STUB-UP AREA

- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE





SINGLE DECK ISLAND Bulk Produce

NOTES:

* STUB-UP AREA

- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Wide Island Bulk Produce Merchandiser

OIP - 8' & 12' wide island double wraparound end

OIPB - 6', 8', 10' & 12' wide island single wraparound end

OIPBB - 8' & 12' wide island double joint

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OIP	8'	6	2.04	102	0.90	66	0.23	28	---	---	---
	12'	8	2.72	136	1.20	88	0.55	66	---	---	---
OIPB	6'	4	1.36	76	0.60	44	0.31	37	---	---	---
	8'	4	2.04	102	0.90	66	0.46	55	---	---	---
	10'	6	2.04	102	0.90	66	0.66	79	---	---	---
	12'	8	2.72	136	1.20	88	0.78	94	---	---	---
OIPBB	8'	6	2.04	102	0.90	66	0.84	101	---	---	---
	12'	8	2.72	136	1.20	88	1.26	151	---	---	---

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
			120 Volts		120 Volts		120 Volts		
OIP	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6
OIPB	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	10'	2	5'	0.28	34	0.12	14.3	0.27	32.1
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6
OIPBB	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model ²	³ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
ONIP/-B/-BB	586	6-8	22	34	48	140

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONIP/-B/-BB	3	6-8	---	---	44	38	---	---	---	---

1 NOTE: "---" not an option on this case model.

2 For ONIP, add 600 BTUH for each wraparound end.

3 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.10.

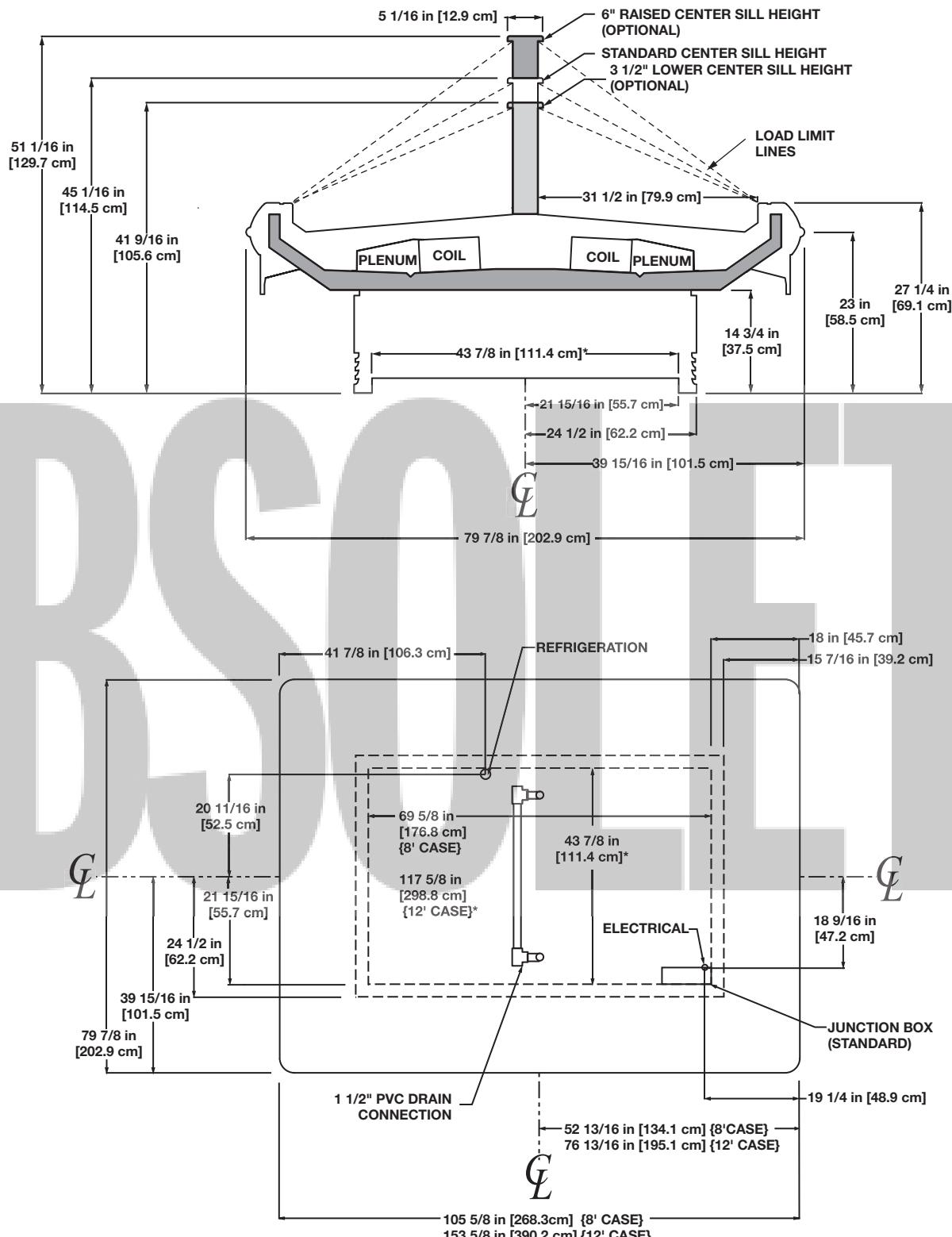
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.

- Standard fans increase refrigeration load by 96 BTUH/fan.

4 Average discharge air velocity at peak of defrost.

All measurements are taken per ARI 1200 - 2002 specifications.

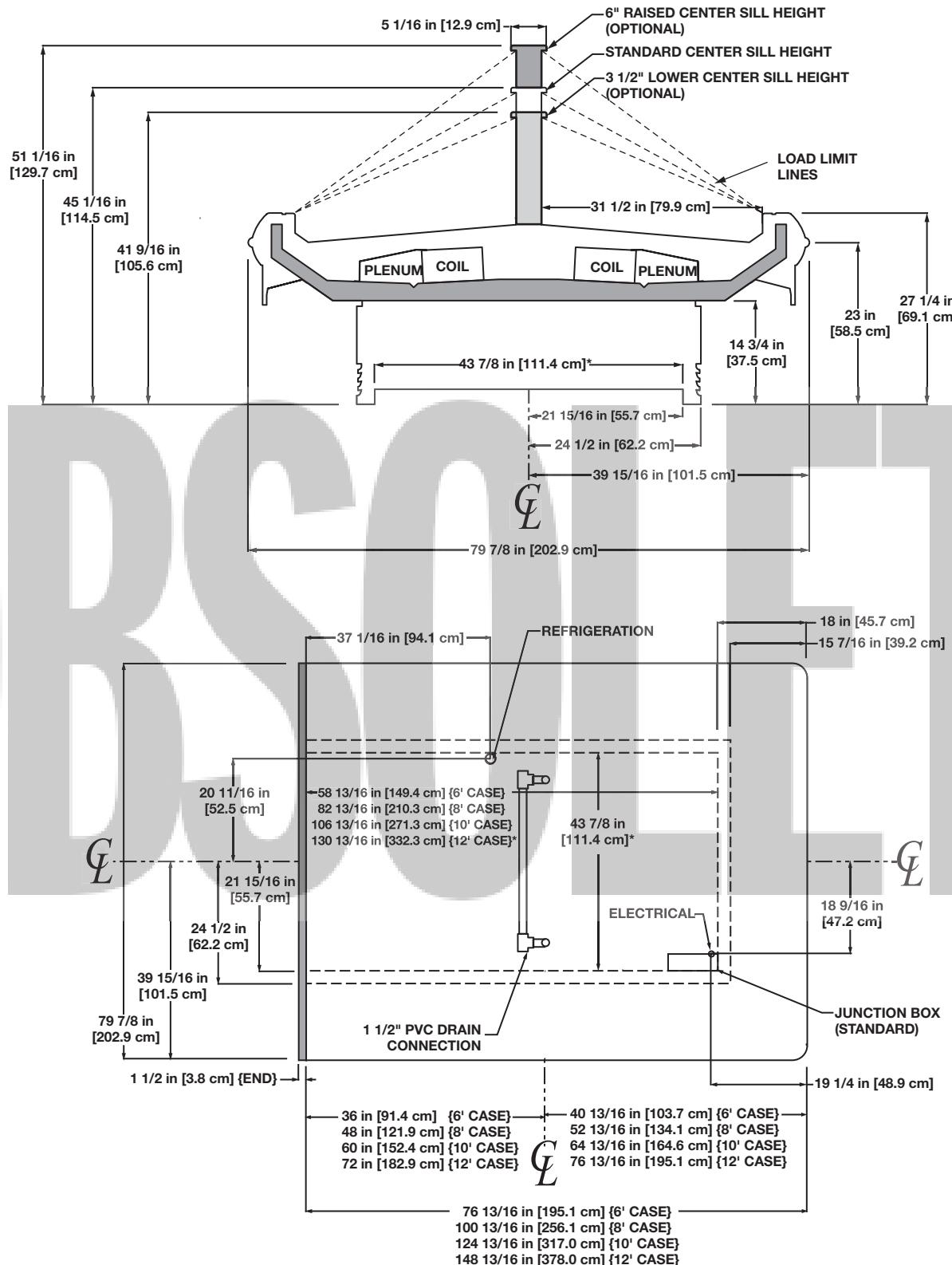



SINGLE DECK ISLAND Bulk Produce
NOTES:

* STUB-UP AREA

- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



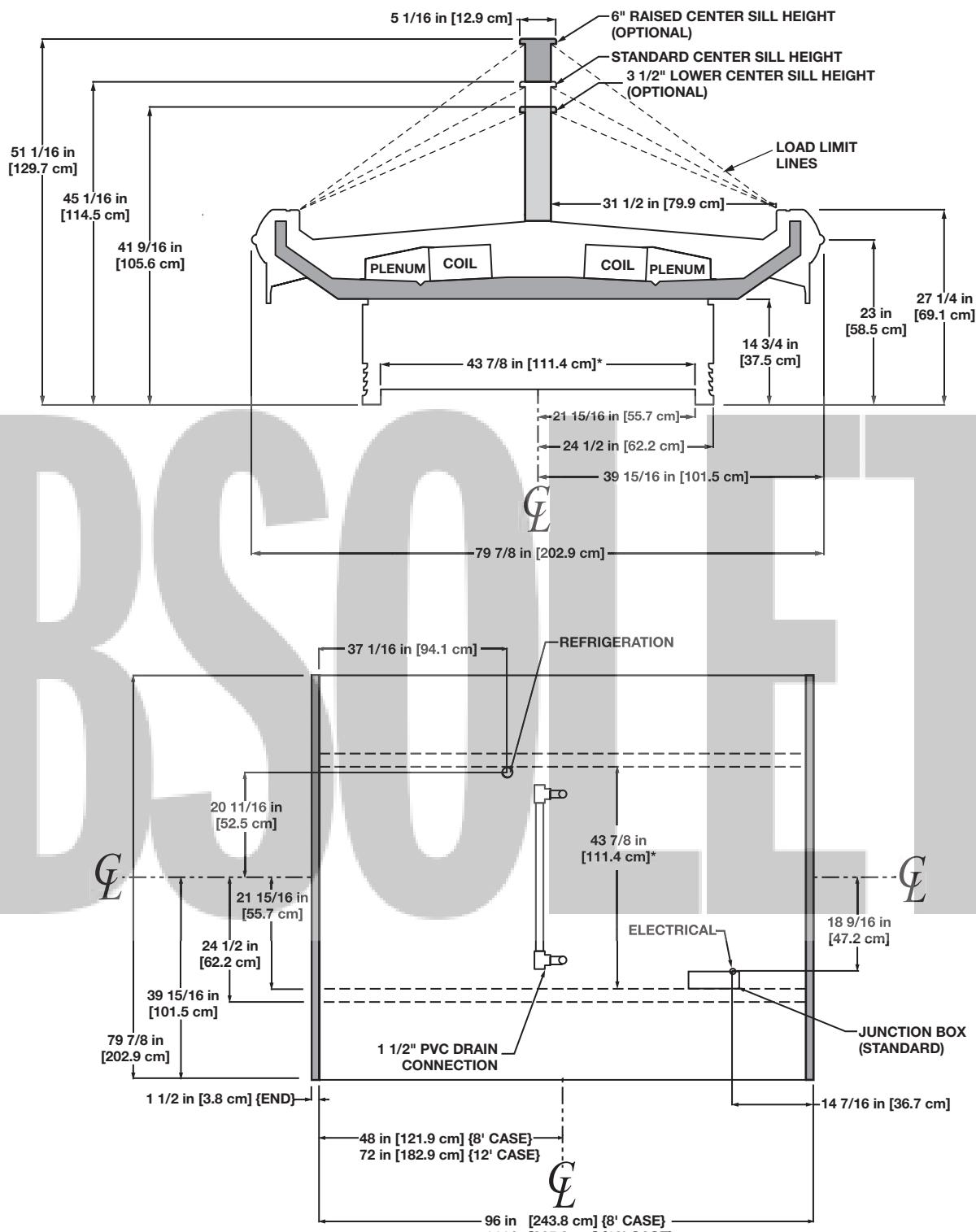


NOTES:

* STUB-UP AREA

• SUCTION LINE - 7/8", LIQUID LINE - 3/8"

• DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



SINGLE DECK ISLAND Bulk Produce



NOTES:

* STUB-UP AREA

• SUCTION LINE - 7/8", LIQUID LINE - 3/8"

• DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

Wide Island Self-Contained Bulk Produce Merchandiser

OIPA - 8' & 12'

System Requirements

Model		Volts	Phase	Hz	Wire	Minimum Circuit Ampacity	Maximum Overcurrent Protection
OIPA	8'	208	1	60	3 wire + ground	8.973	20
	12'	208	1	60	3 wire + ground	29.119	40

Electrical Data

Model	Fans per Case	Standard Fans		Condenser Fans		Anti-Condensate Heater		Defrost Heaters				Drain Heater		Maximum Lights	
		120 Volts		120 Volts		120 Volts		208 Volts		204 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OIPA	8'	6	2.04	102	0.85	88	0.23	28	---	---	---	4.81	1000	3.78	454
	12'	8	2.72	136	2.60	270	0.55	66	---	---	---	4.81	1000	5.04	605

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ² Air Velocity (FPM)
OIPA	8'	45	6-8	34	48	140
	12'	45	6-8	34	48	140

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ⁴ (amps)	LRA ⁵ (amps)	Refrig.	Lbs. of Refrig.
OIPA	8'	208	1	60	1	10.36	48.2	R22
	12' ³	208	1	60	1-1/2	14.28	71	R22

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OIPA	3	---	---	44	38	---	---	---	---

1 NOTE: "---" not an option on this case model.

2 Average discharge air velocity at peak of defrost.

3 This case uses two condensing units.

4 RLA = Running Load Amps

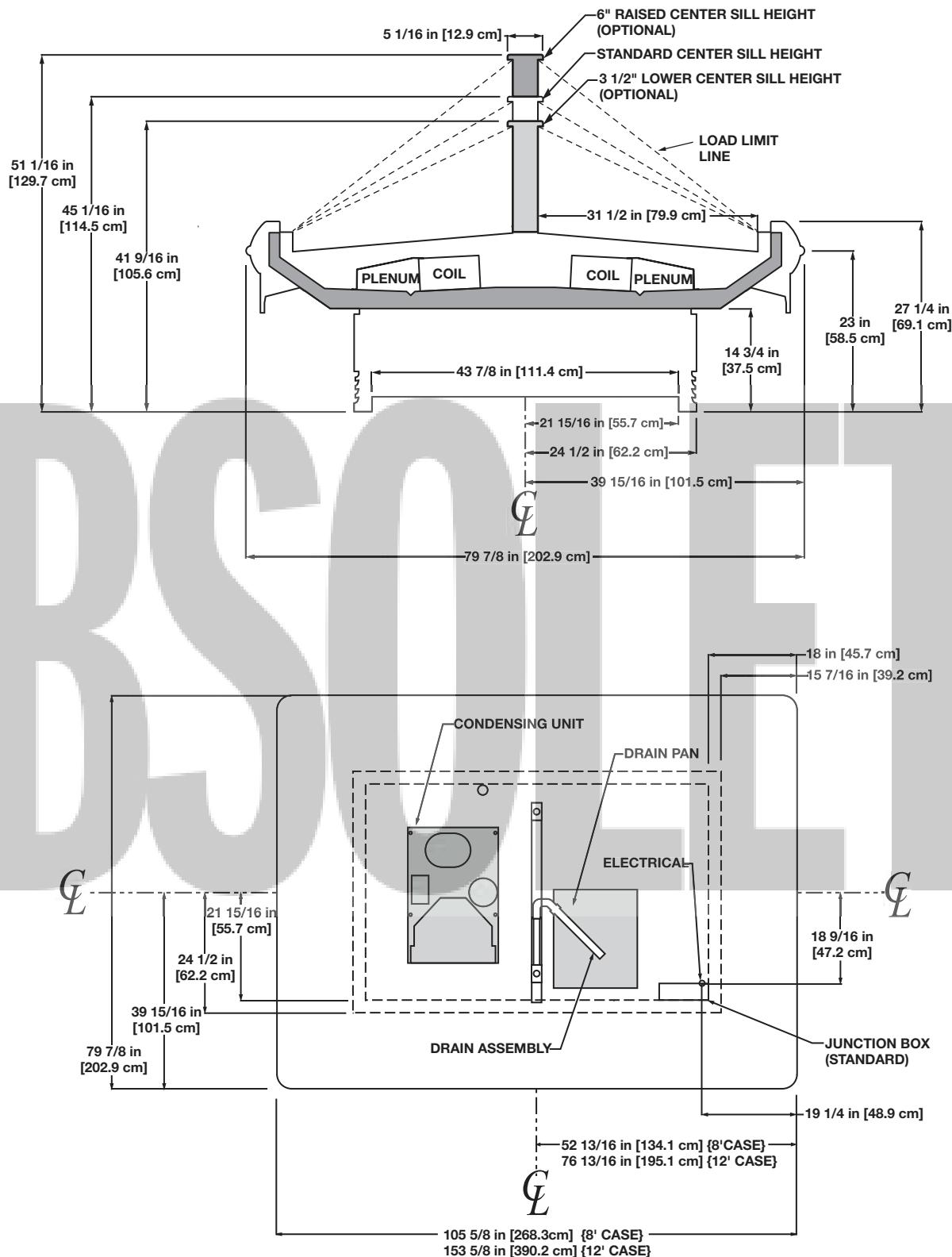
5 LRA = Locked Rotor Amps

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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SINGLE DECK ISLAND Bulk Produce
NOTES:

- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Narrow Single Deck Frozen Food/Ice Cream Merchandiser

ONZ - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Drain Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ONZ	F-8' ¹	3	1.02	51	0.45	33	1.93	232	0.13	15	7.69	1600	8.88	2130
	F-12'	4	1.36	68	0.60	44	2.70	324	0.13	15	11.54	2400	13.31	3195
	C-8'	3	1.02	51	0.45	33	1.93	232	0.13	15	11.54	2400	13.31	3195
	C-12'	4	1.36	68	0.60	44	2.70	324	0.13	15	17.31	3600	19.98	4795

Guidelines & Control Settings

Model	⁴ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ⁵ (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ⁶ Air Velocity (FPM)
ONZ - F	408	3 - 5	-12	7	-2	393
ONZ - C	468	3 - 5	-22	-3	-13	400
ONZ - MT ³	310	6 - 8	17	35	24	400

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONZ	2	13 - 15	35	47	---	---	20	60	---	---
ONZ - MT	1	13 - 15	35	49	---	---	20	60	---	---

1 "F" = frozen food; "C" = ice cream.

2 NOTE: "---" not an option on this case model.

3 Medium temperature application.

4 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.05.

- Standard fans increase refrigeration load by 96 BTUH/fan.

5 Listed evaporator temperature indicates unlighted shelves. For lighted shelves, reduce the listed evaporator temperature by 2°F.

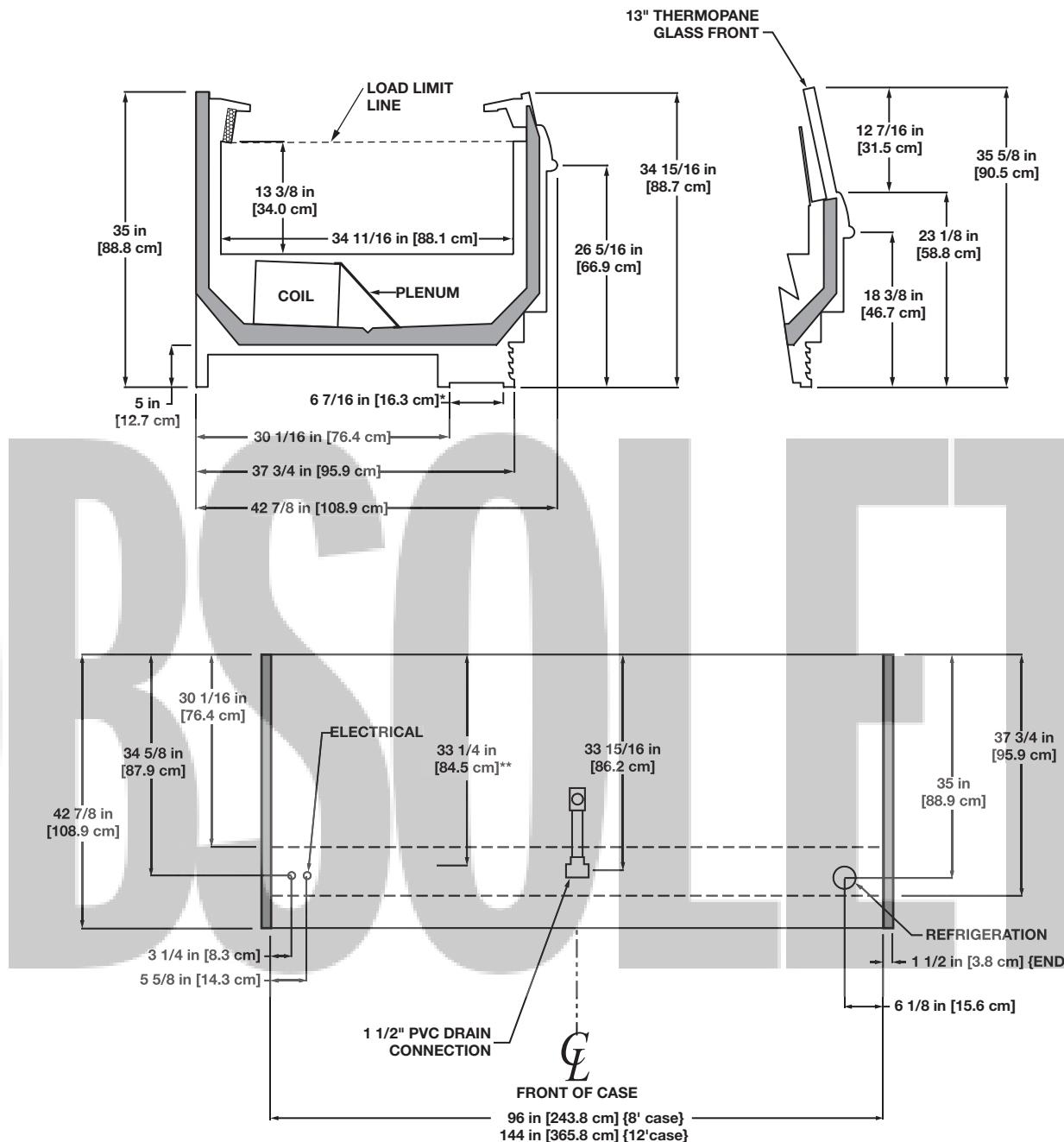
6 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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SINGLE DECK ISLAND

Frozen Food/Ice Cream



Narrow Island Frozen Food/Ice Cream Merchandiser

ONIZ - 6', 8', 10' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Drain Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ONIZ	¹ F-6'	2	0.68	34	0.30	22	0.13	15	5.77	1200	6.66	1598
	¹ F-8'	3	1.02	51	0.45	33	0.13	15	7.69	1600	8.88	2130
	¹ F-10'	3	1.02	51	0.45	33	0.13	15	9.62	200	11.10	2663
	¹ F-12'	4	1.36	68	0.60	44	0.13	15	11.54	2400	13.31	3195
	¹ C-6'	2	0.68	34	0.30	22	0.13	15	11.54	2400	13.32	3196
	¹ C-8'	3	1.02	51	0.45	33	0.13	15	15.38	3200	17.75	4260
	¹ C-10'	3	1.02	51	0.45	33	0.13	15	16.13	3355	18.65	4476
	¹ C-12'	4	1.36	68	0.60	44	0.13	15	23.08	4800	26.63	6390

Anti-Condensate Heater Data

Model		Solid Front ²		Solid Front ² Glass Cap		Solid Wrap ³ End		Glass Front		Glass Front ² Glass Cap		Glass Wrap ³ End	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ONIZ	6'	0.91	109	0.42	50	0.26	31	1.69	203	0.37	44	0.57	68
	8'	0.86	103	0.90	108	0.26	31	1.66	199	0.42	50	0.57	68
	10'	1.00	120	1.20	144	0.26	31	1.95	234	0.62	74	0.57	68
	12'	1.27	152	1.42	170	0.26	31	2.35	282	0.74	89	0.57	68

Guidelines & Control Settings

Model	⁵ BTUH/ft	Superheat Set Point @ Bulb (°F)		Evaporator (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ⁶ Air Velocity (FPM)
		3 - 5	-12				
ONIZ - F	408	3 - 5	-12	7	-2	393	
ONIZ - C	468	3 - 5	-22	-3	-13	400	
ONIZ - MT ⁴	310	6 - 8	17	35	27	400	

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONIZ	2	13 - 15	35	47	---	---	20	60	---	---
ONIZ - MT	1	13 - 15	35	49	45	47	20	60	---	---

1 "F" = frozen food application; "C" = ice cream application.

2 Glass cap heater for stainless steel glass cap option only.

3 Data given for one glass wrap-around end.

4 Medium temperature application.

5 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.05.
- Standard fans increase refrigeration load by 96 BTUH/fan.

6 Average discharge air velocity at peak of defrost.

7 NOTE: "---" not an option on this case model.

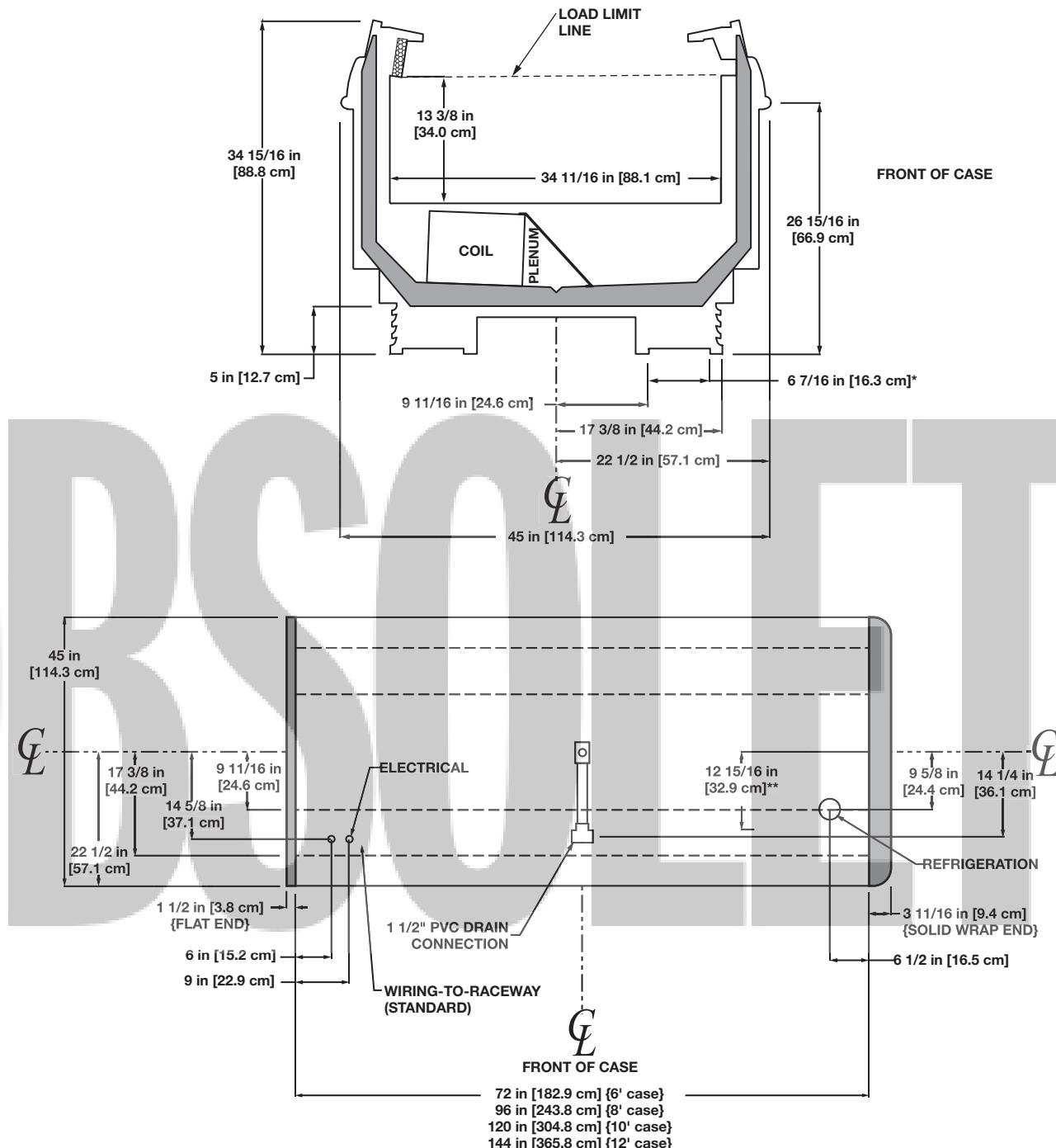
All measurements are taken per ARI 1200 - 2002 specifications.



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ONIZ
(STANDARD FRONT)

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SINGLE DECK ISLAND

Frozen Food/Ice Cream

NOTES:

* STUB-UP AREA

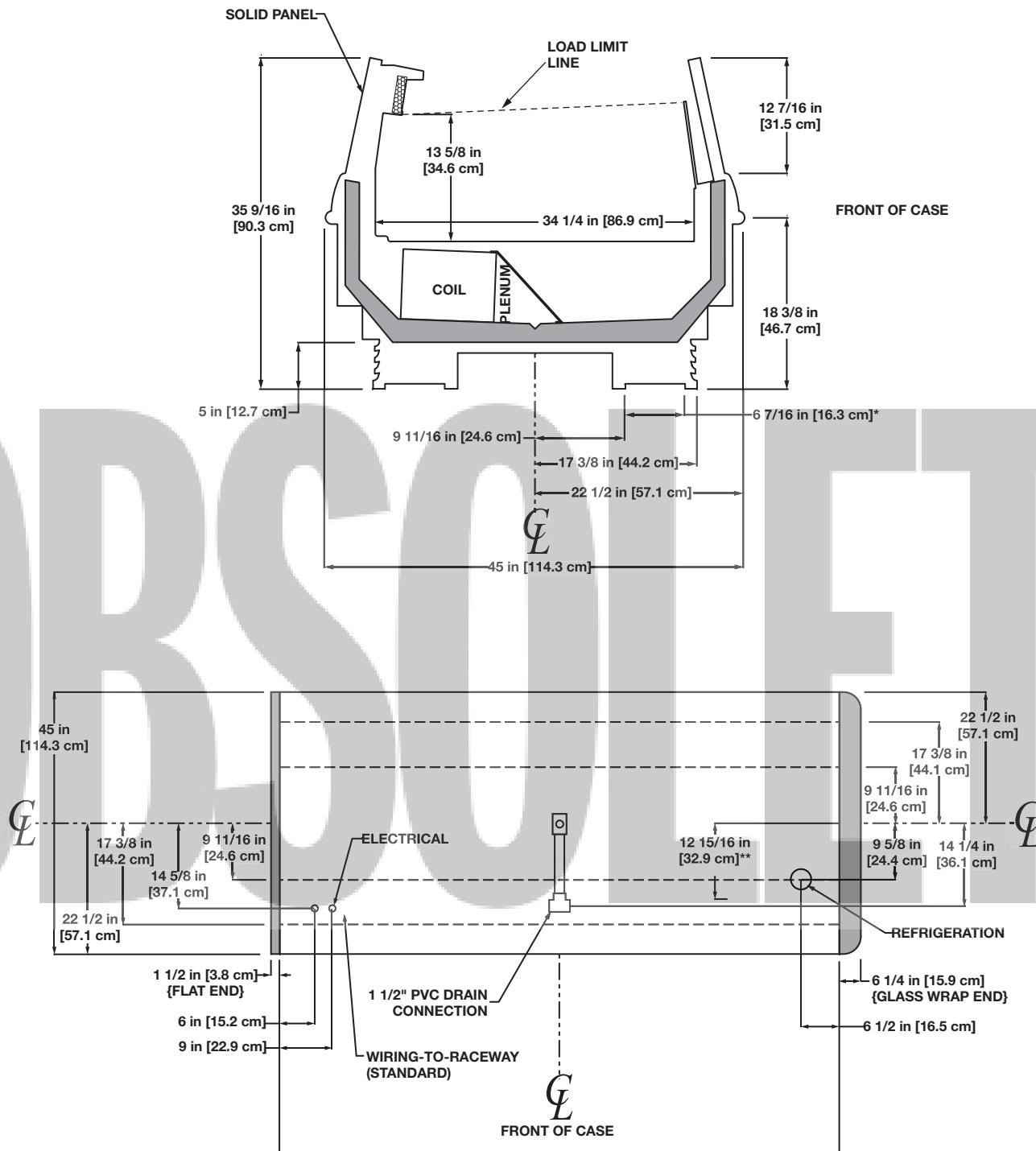
** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



ONIZ
(THERMOPANE GLASS FRONT)

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OBSOLETE

Narrow Island Frozen Food Merchandiser

ONIZGG - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Drain Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
ONIZGG	F-8 ¹	3	1.02	51	0.45	33	2.54	305	0.13	15	7.69	1600	8.88	2130
	F-12 ¹	4	1.36	68	0.60	44	1.87	224	0.13	15	11.54	2400	13.31	3195

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ³ Air Velocity (FPM)
ONIZGG	530	6-8	-22	2	-10	255

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ONIZGG	2	13-15	35	47	---	---	20	60	---	---

1 "F" = frozen food.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.05.
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

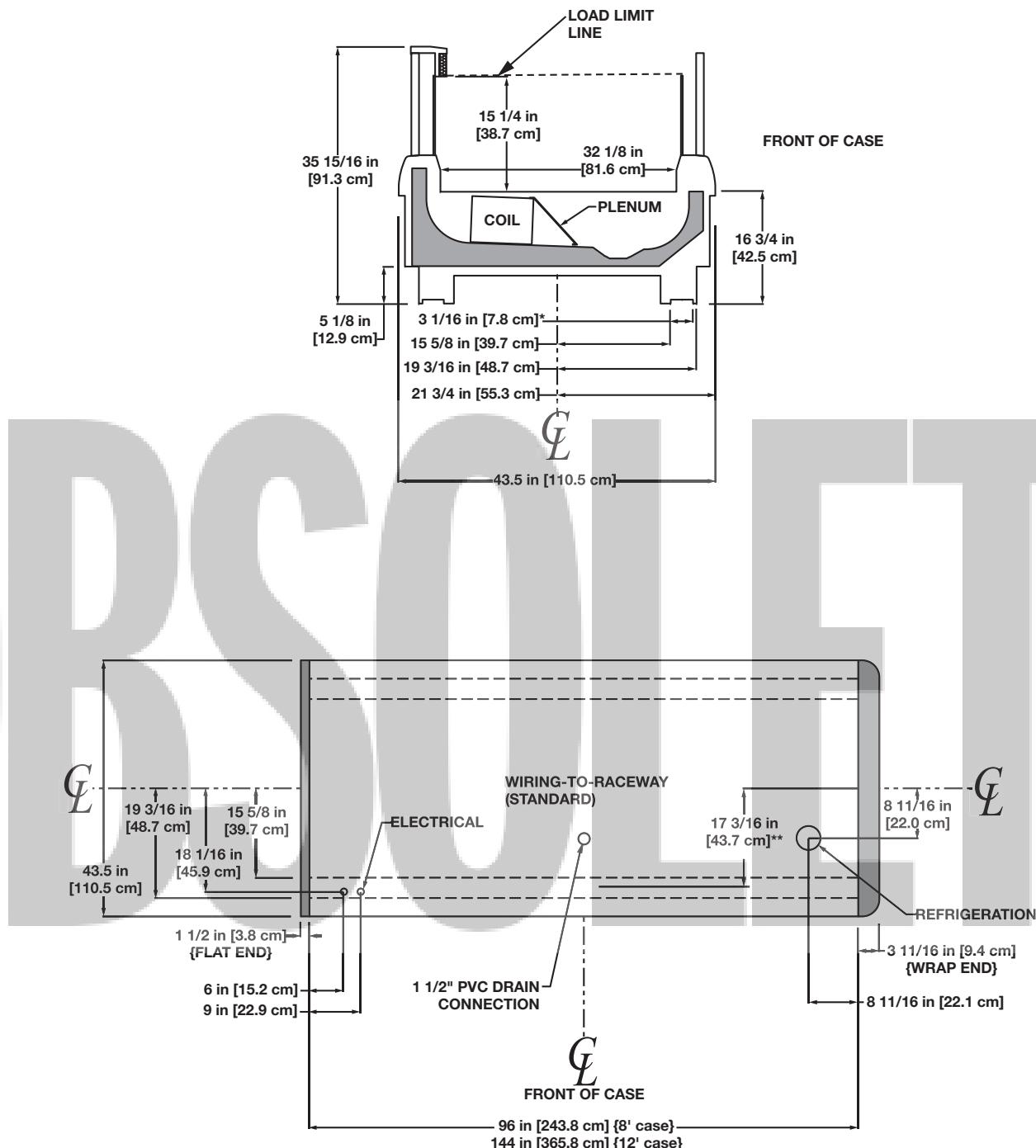
4 NOTE: "---" indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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Island Frozen Food Merchandiser

OIZ - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Drain Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OIZ	8'	3	1.02	51	0.45	33	3.14	377	0.13	15	7.69	1600	8.88	2130
	12'	4	1.36	68	0.60	44	3.97	476	0.13	15	11.54	2400	13.31	3195

Guidelines & Control Settings

Model	⁴ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator ⁵ (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ⁶ Air Velocity (FPM)
OIZ ²	488	3-5	-22	-12	-4	200
OIZ - MT ³	320	6-8	17	27	35	200

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OIZ	2	13 - 15	35	47	---	---	20	60	---	---
OIZ - MT ⁷	1	13 - 15	35	49	---	---	20	60	---	---

1 NOTE: “---” indicates not an option on this case model.

2 Not intended for frozen juice application.

3 Medium temperature application.

4 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.03.
- Standard fans increase refrigeration load by 96 BTUH/fan.

5 Listed evaporator temperature indicates unlighted shelves. For lighted shelves, reduce the listed evaporator temperature by 2°F.

6 Average discharge air velocity at peak of defrost.

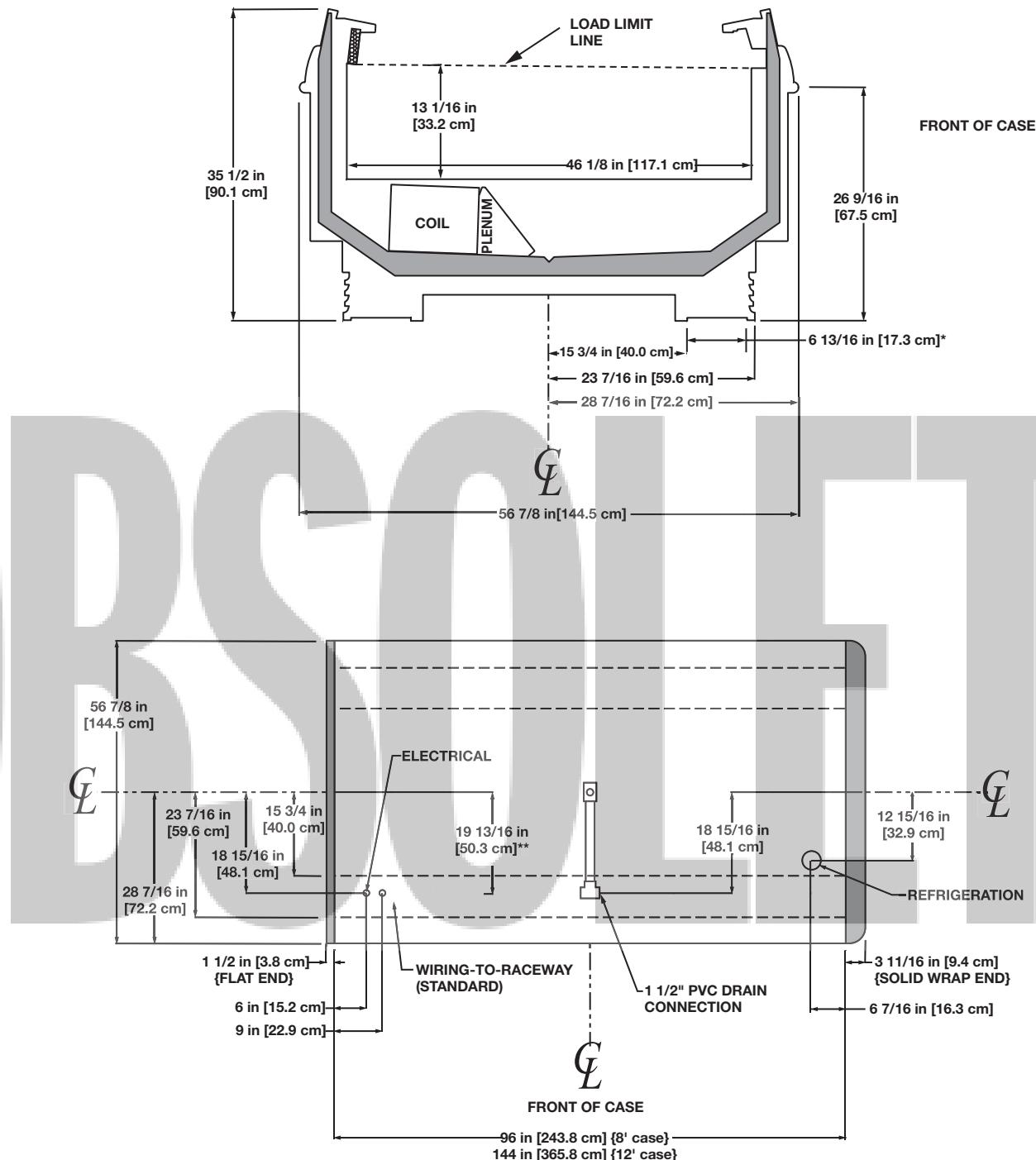
7 Medium temperature application.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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**NOTES:**

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- SUCTION LINE - 7/8", LIQUID LINE - 3/8"

- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Wide Island Frozen Food/Ice Cream Merchandiser

OWIZ - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Drain Heaters		Defrost ² Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OWIZ	F-8'	4	1.36	68	0.60	44	0.26	30	7.69	1600	8.88
	F-12'	6	2.04	102	0.90	66	0.26	30	11.54	2400	13.31
	C-8'	4	1.36	68	0.60	44	0.26	30	11.54	2400	13.31
	C-12'	6	2.04	102	0.90	66	0.26	30	17.31	3600	19.98

Anti-Condensate Heater Data

Model		Solid ³ Front		Glass Front		Glass ⁴ Cap		Glass Wrap ⁵ End		Super Structure	
		120 Volts		120 Volts		120 Volts		120 Volts		120 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OWIZ	8'	2.62	314	3.02	362	0.50	60	0.68	82	0.50	60
	12'	3.96	475	4.38	526	0.74	89	0.68	82	0.76	91

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
OWIZ	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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OWIZ

HILL PHOENIX®EXCELLENCE®
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Guidelines & Control Settings

Model	⁷ BTUH/ft	Superheat Set Point @ Bulk (°F)	Evaporator (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ⁸ Air Velocity (FPM)
OWIZ - F	587	3 - 5	-12	0	-6	180
OWIZ - C	692	3 - 5	-22	-10	-16	180
OWIZ - MT ⁶	450	6 - 8	17	35	27	180

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OWIZ	1	13 - 15	60	49	---	---	20	60	---	---
OWIZ - MT	1	13 - 15	35	49	---	---	20	60	---	---

- 1 "F" = frozen food; "C" = ice cream.
 2 Defrost data for one side of case only.
 3 Solid wraparound ends have no anti-condensate heaters.
 4 Glass cap heater for stainless steel glass cap option only.
 5 Data given is for one glass wraparound end.
 6 Medium temperature application.
 7 BTUH/ft notes:
 - Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
 - Standard fans increase refrigeration load by 96 BTUH/fan.
 8 Average discharge air velocity at peak of defrost.
 9 NOTE: "---" not an option on this case model.

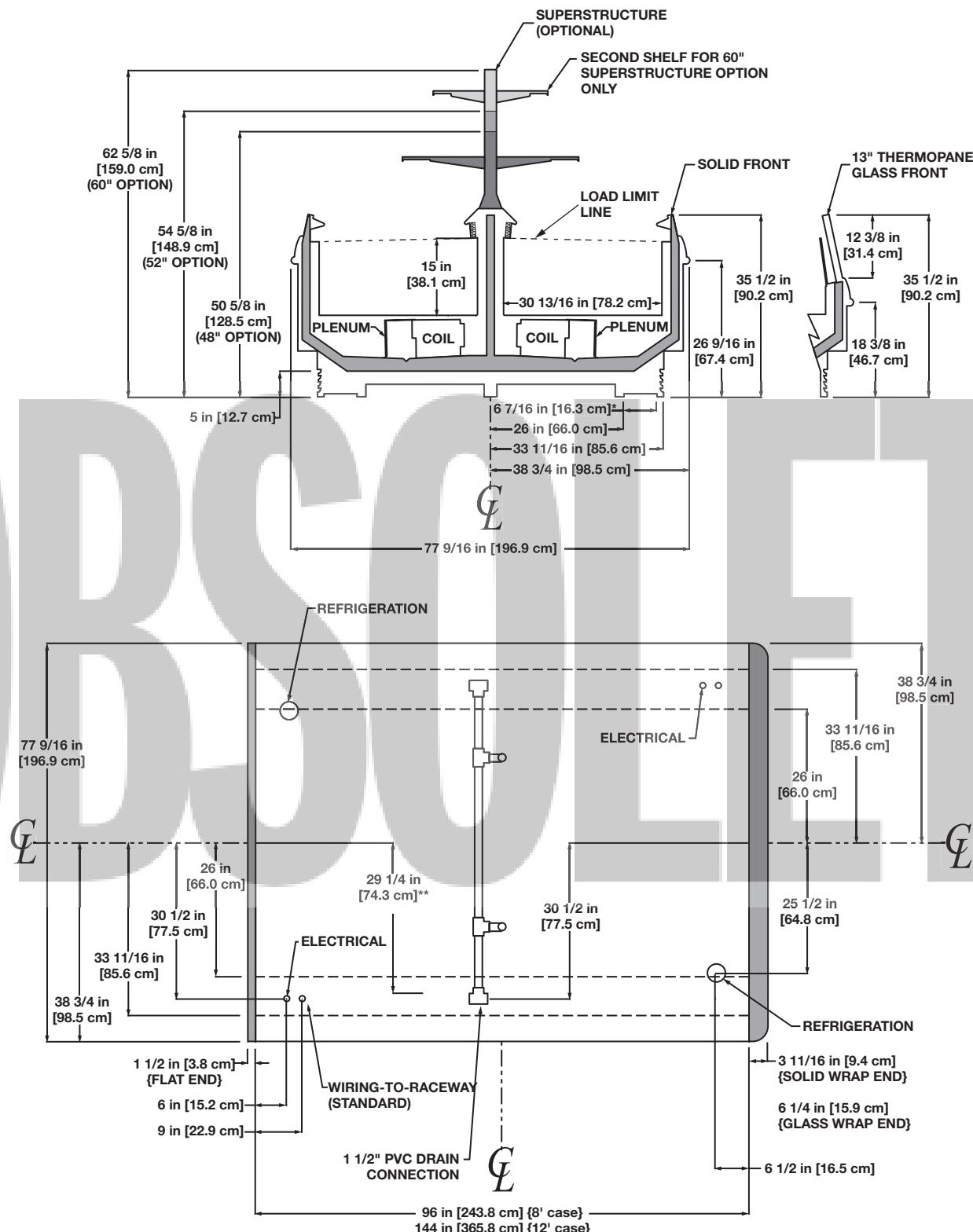
SINGLE DECK ISLAND

Frozen Food/Ice Cream

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.

**HILL PHOENIX®**
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NOTES:

* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- SUCTION LINE - 7/8", LIQUID LINE - 3/8"

- AVAILABLE SHELF SIZES: 10", 12", 14", & 16"

- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



OBSOLETE

Wide Island End Cap Frozen Food/Ice Cream Merchandiser

OWEZ

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Drain Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
OWEZ	F ¹	2	0.68	34	0.30	22	0.13	15	5.77	1200	6.65	1596
	C ¹	2	0.68	34	0.30	22	0.13	15	8.65	1800	9.98	2394

Anti-Condensate Heater Data

Model	Solid Front		Glass Front		Glass ² Cap	
	120 Volts		120 Volts		120 Volts	
	Amps	Watts	Amps	Watts	Amps	Watts
OWEZ	1.56	187	1.96	235	0.51	61

Guidelines & Control Settings

Model	⁴ BTUHs/case	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ⁵ Air Velocity (FPM)
OWEZ - F	2663	3-5	-12	0	-6	200
OWEZ - C	3298	3-5	-22	-10	-16	200
OWEZ - MT ³	2150	6-8	17	35	27	200

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OWEZ	1	13-15	60	49	---	---	20	60	---	---
OWEZ - MT	1	13-15	35	49	---	---	20	60	---	---

1 "F" = frozen food; "C" = ice cream.

2 Glass cap heater for stainless steel glass cap option only.

3 Medium temperature application.

4 BTUH/cs notes:

- Listed BTUH/cs indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
- Standard fans increase refrigeration load by 96 BTUH/fan.

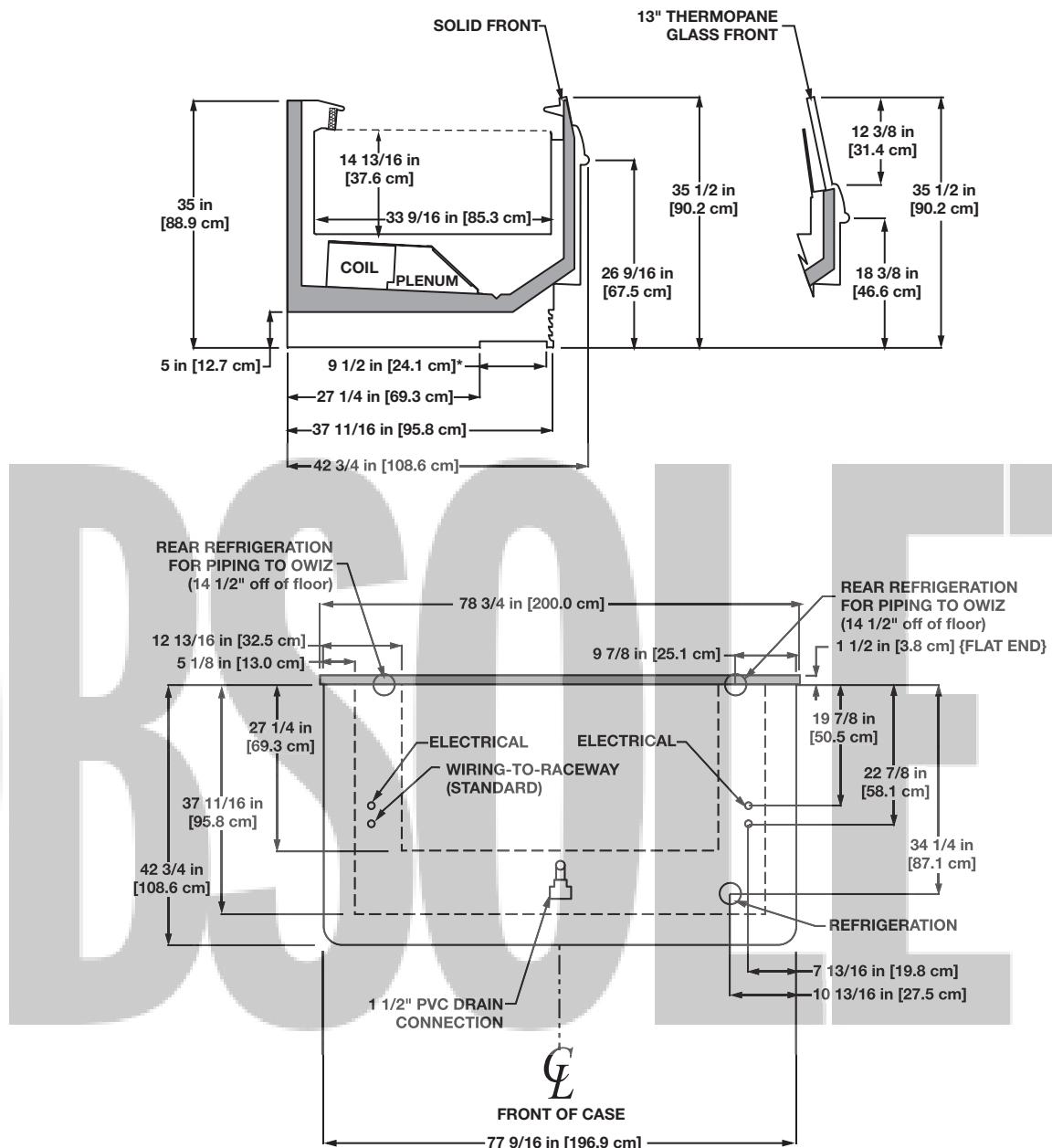
5 Average discharge air velocity at peak of defrost.

6 NOTE: "---" not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.





Wide Single Deck Frozen Food Merchandiser

OWZGG - 8' & 12'

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Fans per Case	Glass Heater		Defrost Heaters				
		120 Volts		120 Volts			120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts		Amps	Watts	Amps	Watts	Amps	Watts	
OWZGG	8'	2	0.68	34	0.30	22	- - - ¹	1.57	189	7.69	1600	8.87	2130
	12'	3	1.02	51	0.45	33	- - -	2.10	253	11.54	2400	13.31	3195

Guidelines & Control Settings

Model	^{2,3} BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ⁴ Air Velocity (FPM)
OWZGG	382	3 - 5	-22	-10	12	255

Defrost Controls

Model	Defrosts Per Day	Run-Off Time (min)	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OWZGG	3	5	50	45	- - -	- - -	20	60	- - -	- - -

1 NOTE: “- - -” indicates that this is not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.12.
- Standard fans increase refrigeration load by 96 BTUH/fan.

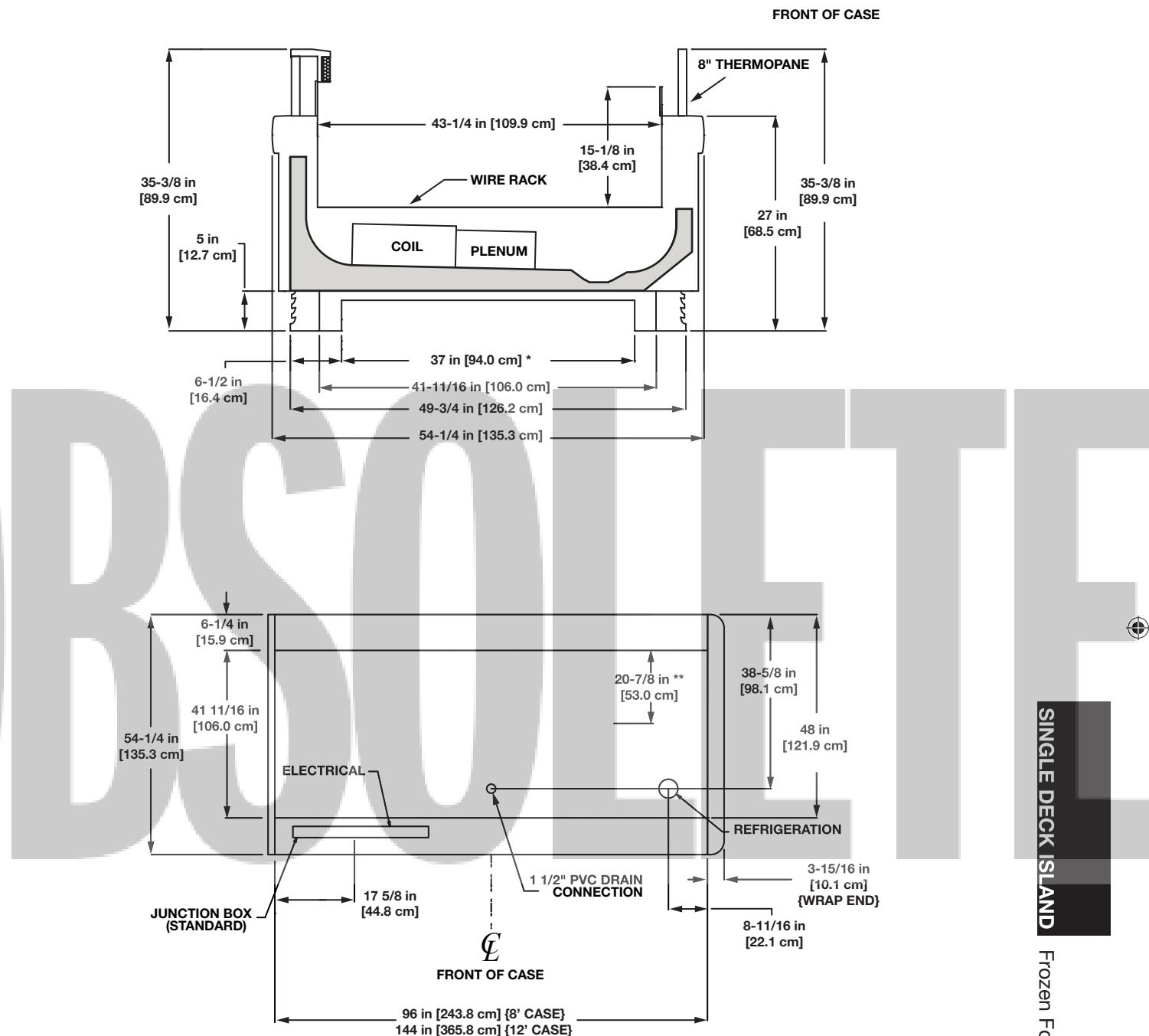
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



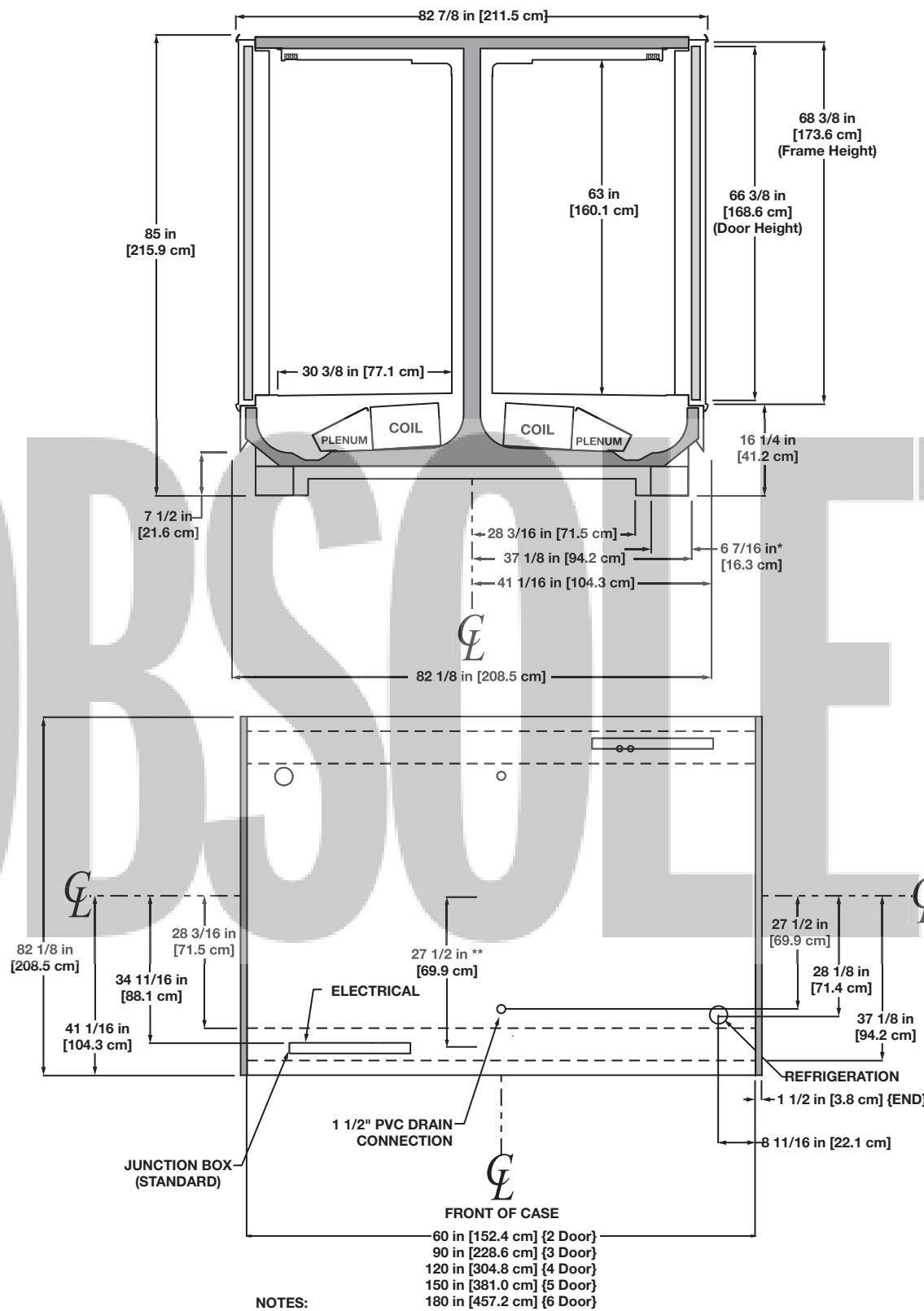
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**NOTES:**

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS
ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- A 2" MINIMUM AIR GAP IS REQUIRED BETWEEN THE REAR OF THE CASE AND A WALL
SUCTION LINE - 7/8"; LIQUID LINE - 1/2"

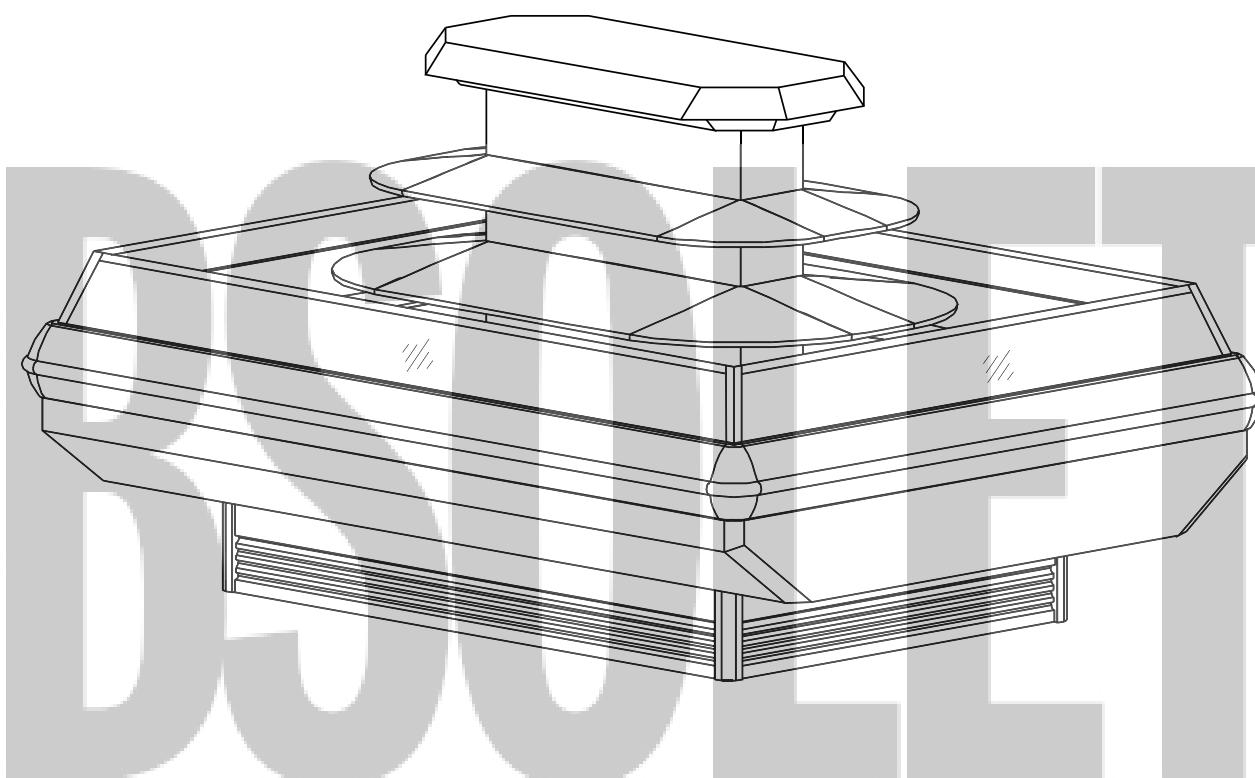


OBSOLETE



- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20", 22" & 23 1/2"; SOLID SHELVES 18", 20", 22", 24" & 27"
- TOP SHELF MUST BE 24" OR SHORTER WHEN USING 27" SHELVES
- RECOMMENDED CONFIGURATION IS 1 - 24" SHELF AND 4 - 27" SHELVES BELOW TOP SHELF
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

MULTI-DECK ISLAND



NOTES

- Cases shown with an ANSI/NSF* mark are listed by NSF.
- Cases shown with a UL* mark are listed by Underwriters Laboratories Inc.
- Allow for an extra 1/8" per joint when lining up merchandisers.
- Technical information contained herein is subject to change without notice.

* ANSI - American National Standard Institute
NSF - National Sanitation Foundation
UL - Underwriters Laboratories Inc

Wide Island Multi-Deck Deli/Meat Merchandiser

O2IM - 8' (Double Wrap-Around End)

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O2IM	8'	6	3.00	180	0.46	27.6	0.67	80	7.70	1600	8.88	2130

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
			O2IM	8'	2	4'	0.47	56	0.20

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ² Air Velocity (FPM)
O2IM Meat	1248	6-8	17	38	26	270
O2IM Deli	1162	6-8	22	40	30	270

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost ³		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O2IM	4	6-8	30	47	45	45	26	45	- - - ⁴	- - -

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

3 Only recommended with a High-Efficiency Coil with a 22°F evaporator temperature.

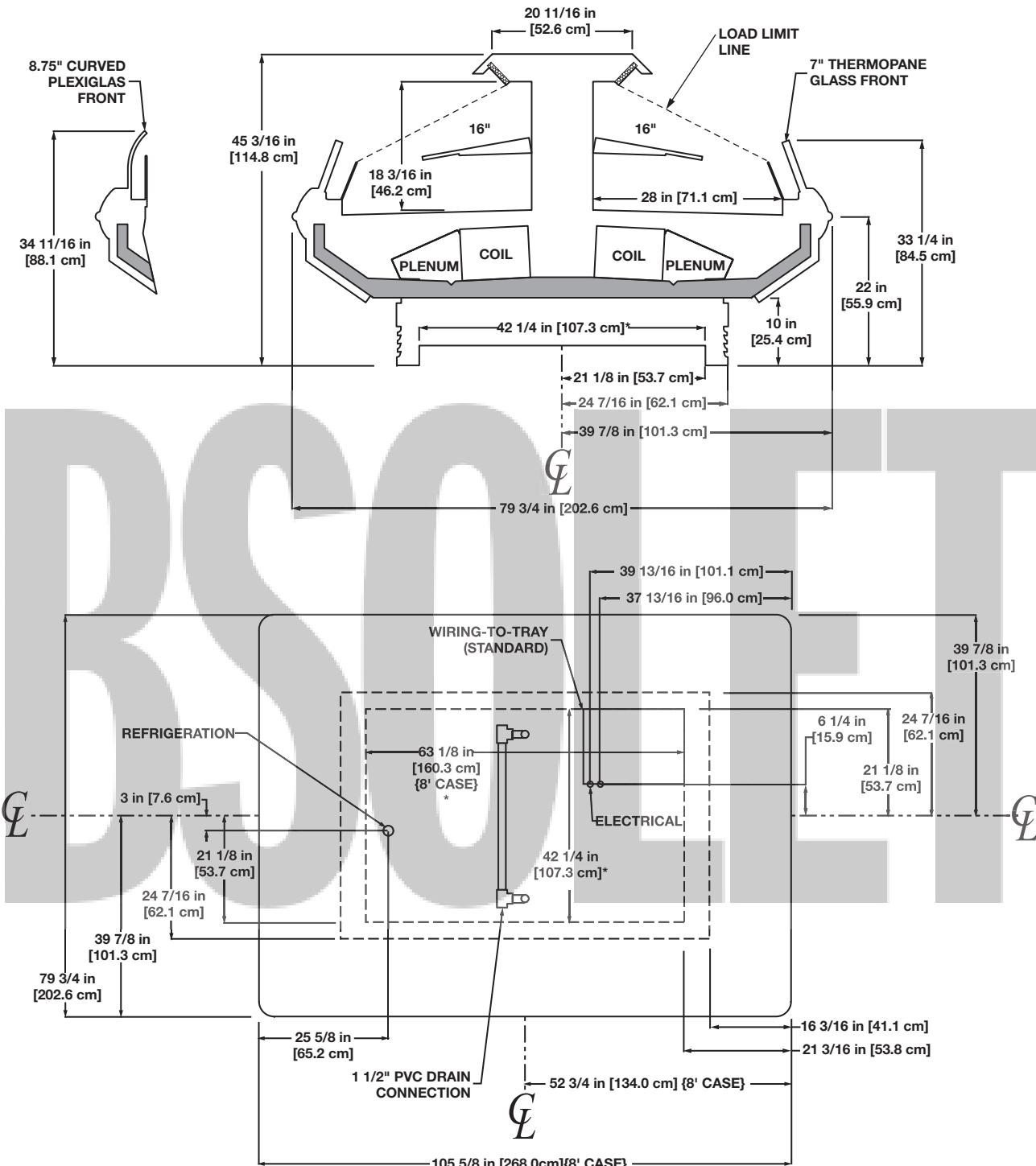
4 NOTE: “- - -” indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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MULTI-DECK ISLAND

Deli/Meat

NOTES:

- * STUB-UP AREA
- FRONT AND CENTER SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Narrow Island Multi-Deck Deli/Meat Merchandiser

ON3IM - 8' & 12' (Double Wrap-Around End)

Electrical Data

Model	Fans per Case	Standard Fans		High-Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
ON3IM	8'	6	3.00	180	0.46	27.6	0.67	80	7.70	1600	8.88
	12'	8	4.00	240	0.62	36.8	1.06	127	11.54	2400	13.32
											3200

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			Standard Power (Cornice or Shelf)		High Power (Cornice)				
			120 Volts	Amps	120 Volts	Amps	120 Volts	Amps	
ON3IM	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ² Air Velocity (FPM)
ON3IM Meat	1179	6-8	17	38	26	270
ON3IM Deli	1075	6-8	22	40	30	270

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost ³		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
ON3IM	4	6-8	30	47	45	45	26	45	- - - ⁴	- - -

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

3 Only recommended with a High-Efficiency Coil with a 22°F evaporator temperature.

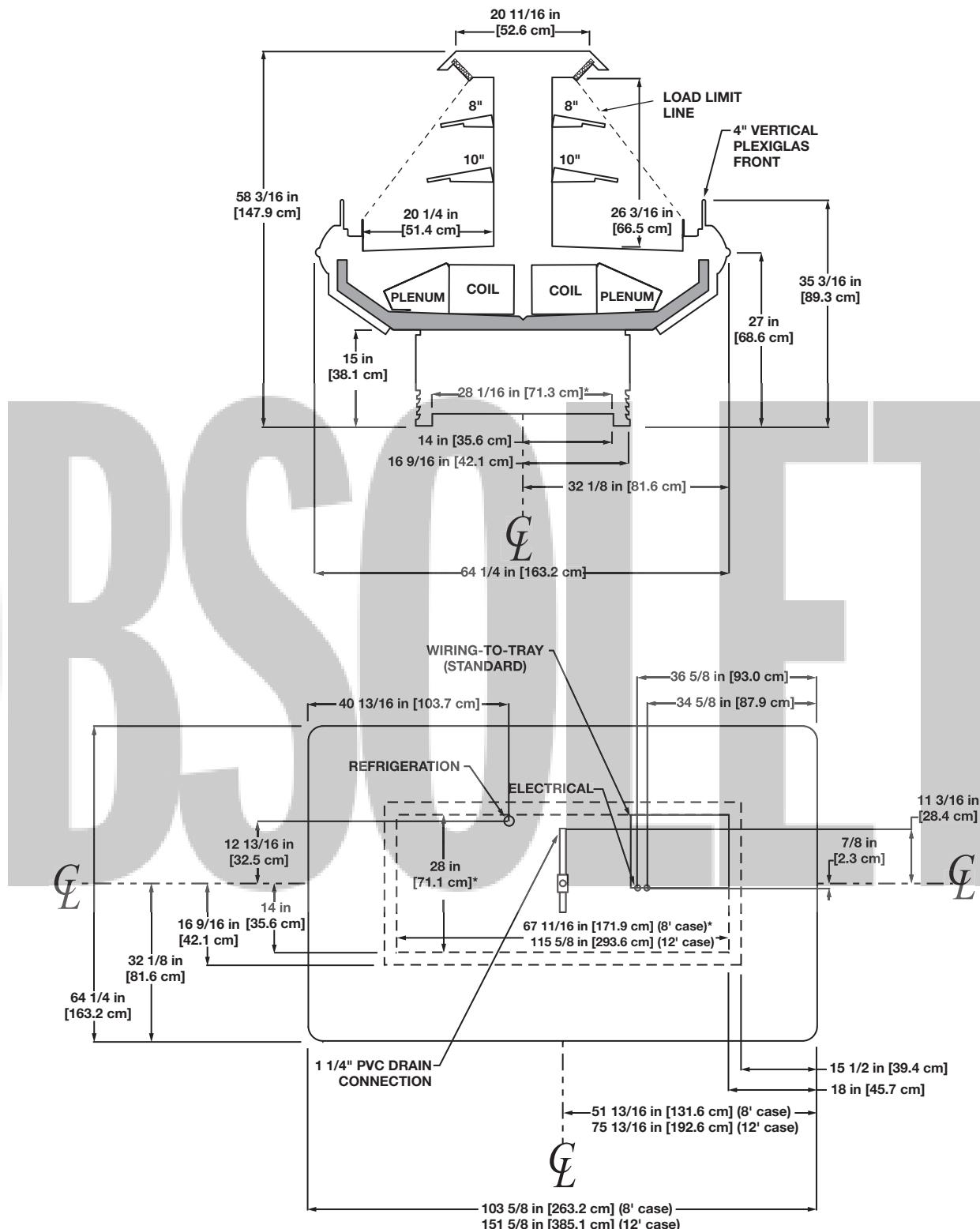
4 NOTE: “- - -” indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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MULTI-DECK ISLAND

Deli/Meat



Wide Island Multi-Deck Deli/Meat Merchandiser

O3IM - 8' & 12' (Double Wrap-Around End)

O3IMB - 6', 8' & 12' (Single Wrap-Around End)

O3IMBB - 8' (Double Joint End)

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters				
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O3IM	8'	6	3.00	180	0.46	27.6	0.67	80	7.70	1600	8.88	2130
	12'	8	4.00	240	0.62	36.8	1.06	127	11.54	2400	13.32	3200
O3IMB	6'	4	2.00	120	0.31	18.4	0.63	76	5.77	1200	6.66	1596
	8'	6	3.00	180	0.46	27.6	0.88	106	7.70	1600	8.88	2130
	12'	8	4.00	240	0.62	36.8	1.24	149	11.54	2400	13.32	3200
O3IMBB	8'	6	3.00	180	0.46	27.6	0.91	109	7.70	1600	8.88	2130

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)					
				Standard Power (Cornice or Shelf)		High Power (Cornice)			
				120 Volts		120 Volts			
O3IM	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6
O3IMB	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6
O3IMBB	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ² Air Velocity (FPM)
O3IM	1496	6-8	17	26	38	270
	1366	6-8	22	30	40	270
O3IMB	1496	6-8	17	26	38	270
	1366	6-8	22	30	40	270
O3IMBB	1266	6-8	17	26	38	270
	1178	6-8	22	30	40	270

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost ³		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3IM/-B/-BB	4	6-8	30	47	45	45	26	45	- - - ⁴	- - -

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

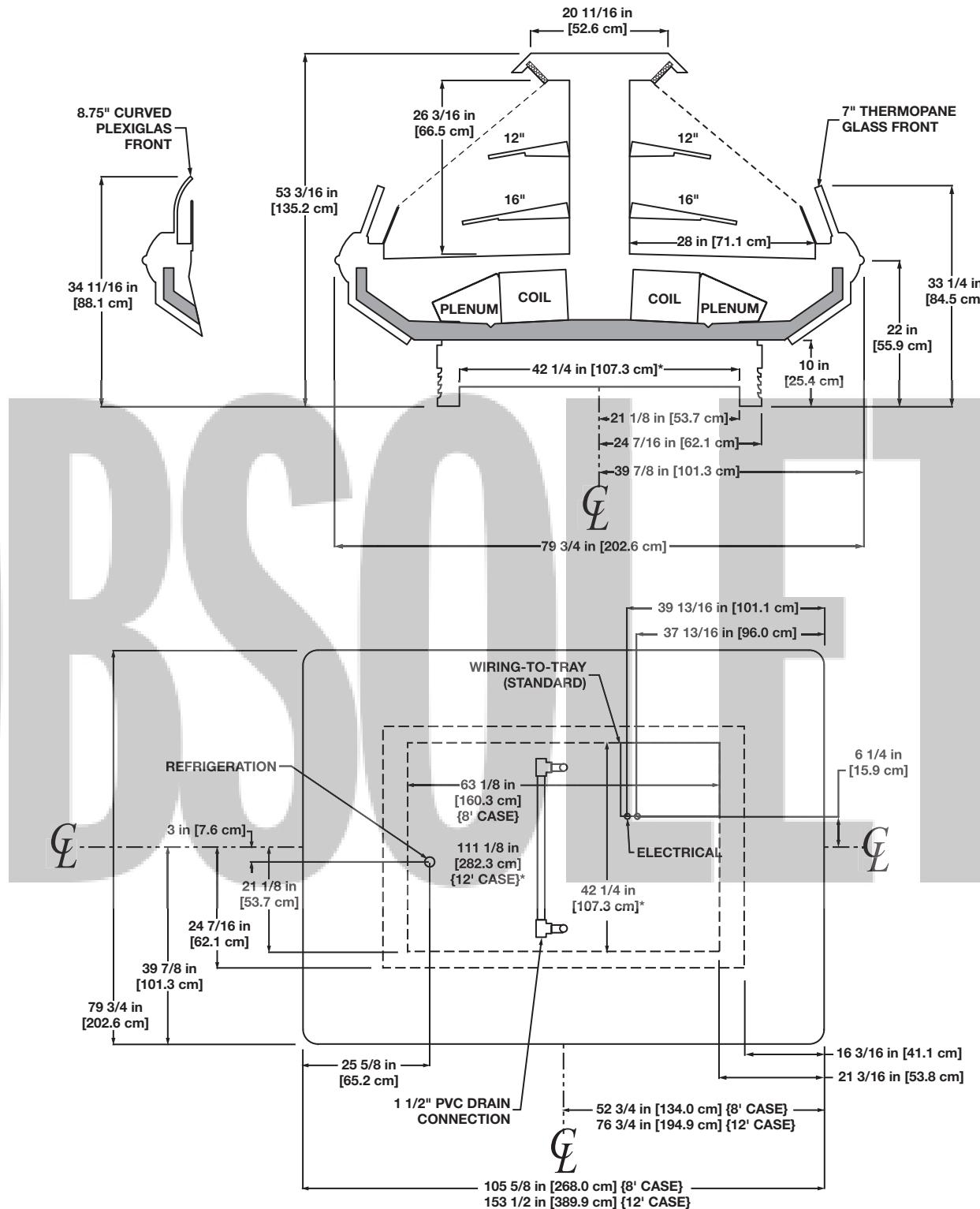
3 Only recommended with a High-Efficiency Coil with a 22°F evaporator temperature.

4 NOTE: “- - -” indicates not an option on this case model.

All measurements are taken per ARI 1200 - 2002 specifications.



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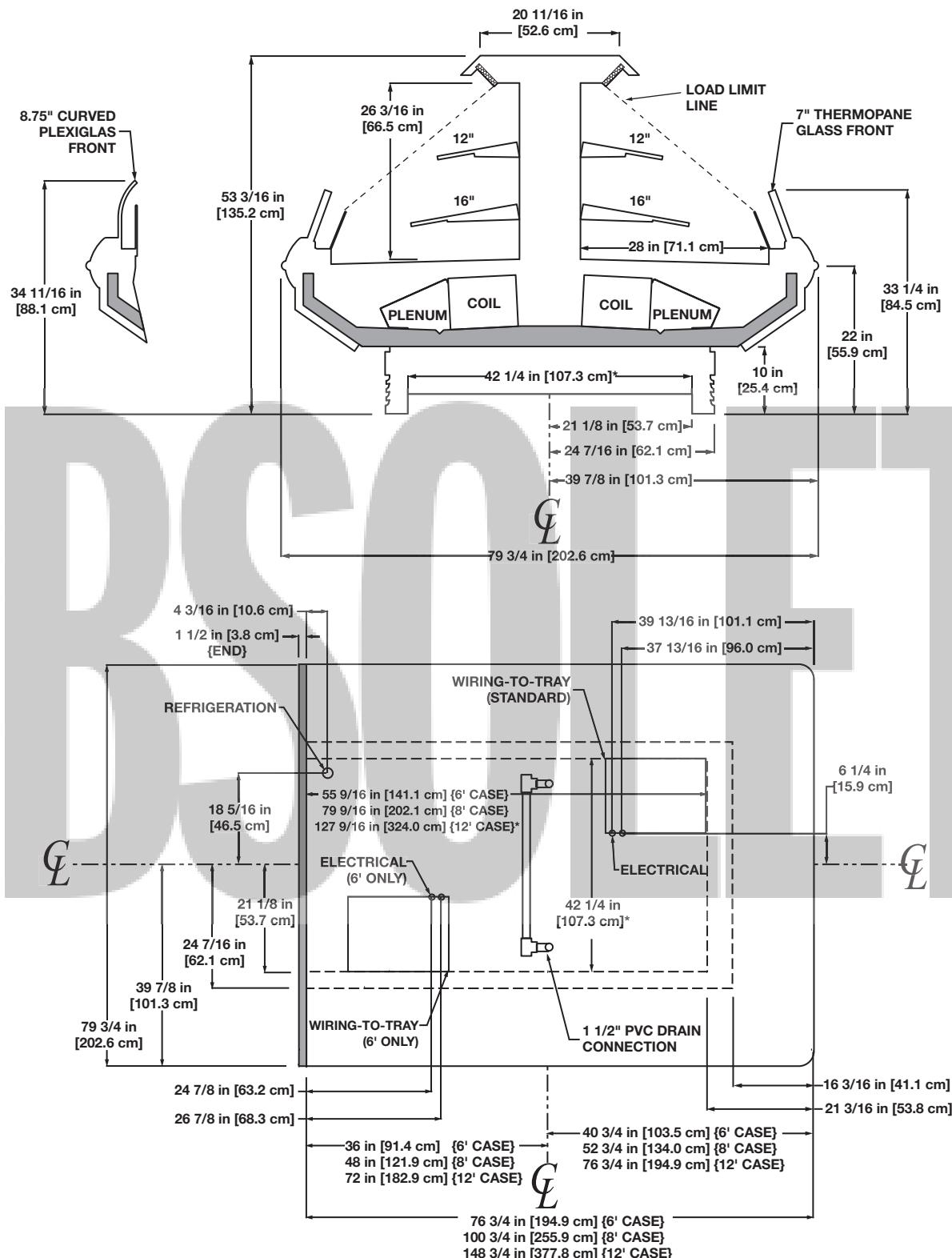
Deli/Meat

NOTES:

* STUB-UP AREA

- FRONT AND CENTER SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

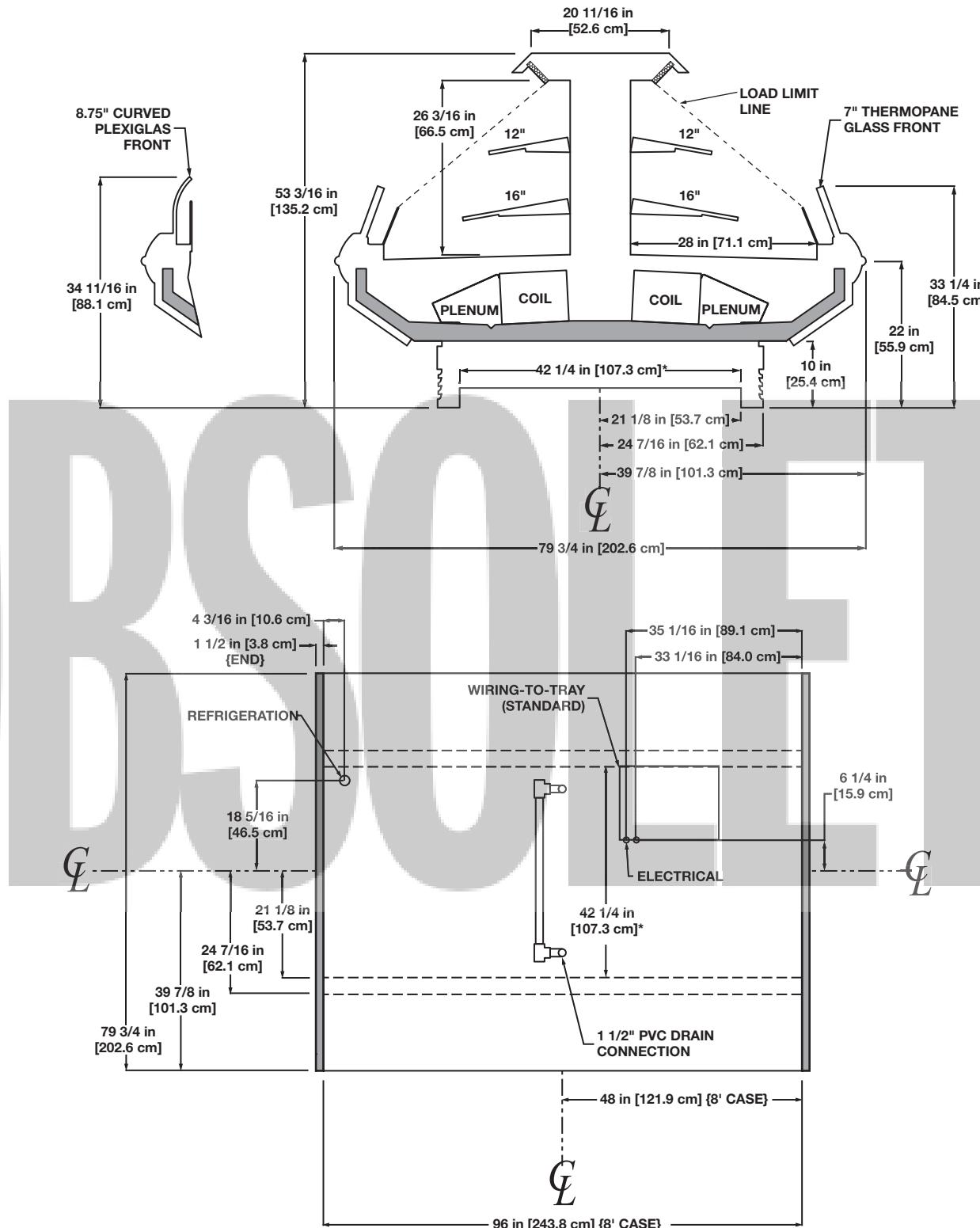




NOTES:

- * STUB-UP AREA
- FRONT AND CENTER SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



**NOTES:**

* STUB-UP AREA

- FRONT AND CENTER SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE



Wide Island Multi-Deck Produce Merchandiser

O3IP - 8' & 12' Wide Island (Double Wrap-Around End)

O3IPB - 8' & 12' Wide Island (Single Wrap-Around End)

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O3IP	8'	6	2.04	102	0.90	66	0.82	98	4.34	902	5.00
	12'	8	2.72	136	1.20	88	1.08	130	7.22	1502	8.33
O3IPB	8'	6	2.04	102	0.90	66	0.75	90	4.34	902	5.00
	12'	8	2.72	136	1.20	88	1.17	140	7.22	1502	8.33

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)	Clearvoyant LED Lighting (Per Light Row)			
				Standard Power (Cornice or Shelf)		High Power (Cornice)	
				120 Volts		120 Volts	
O3IP	8'	2	4'	0.47	56	0.20	23.8
	12'	3	4'	0.70	84	0.30	35.7
O3IPB	8'	2	4'	0.47	56	0.20	23.8
	12'	3	4'	0.70	84	0.30	35.7
				0.44	52.4	0.66	78.6
				0.44	52.4	0.66	78.6

Guidelines & Control Settings

Model ¹	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ³ Air Velocity (FPM)
O3IP-B	946	6-8	22	48	34	160

Defrost Controls

Model	Defrost per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost ³		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3IP-B	4	6-8	30	47	44	38	26	45	- - - ⁴	- - -

1 Add 650 BTUH per wraparound end.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

3 Average discharge air velocity at peak of defrost.

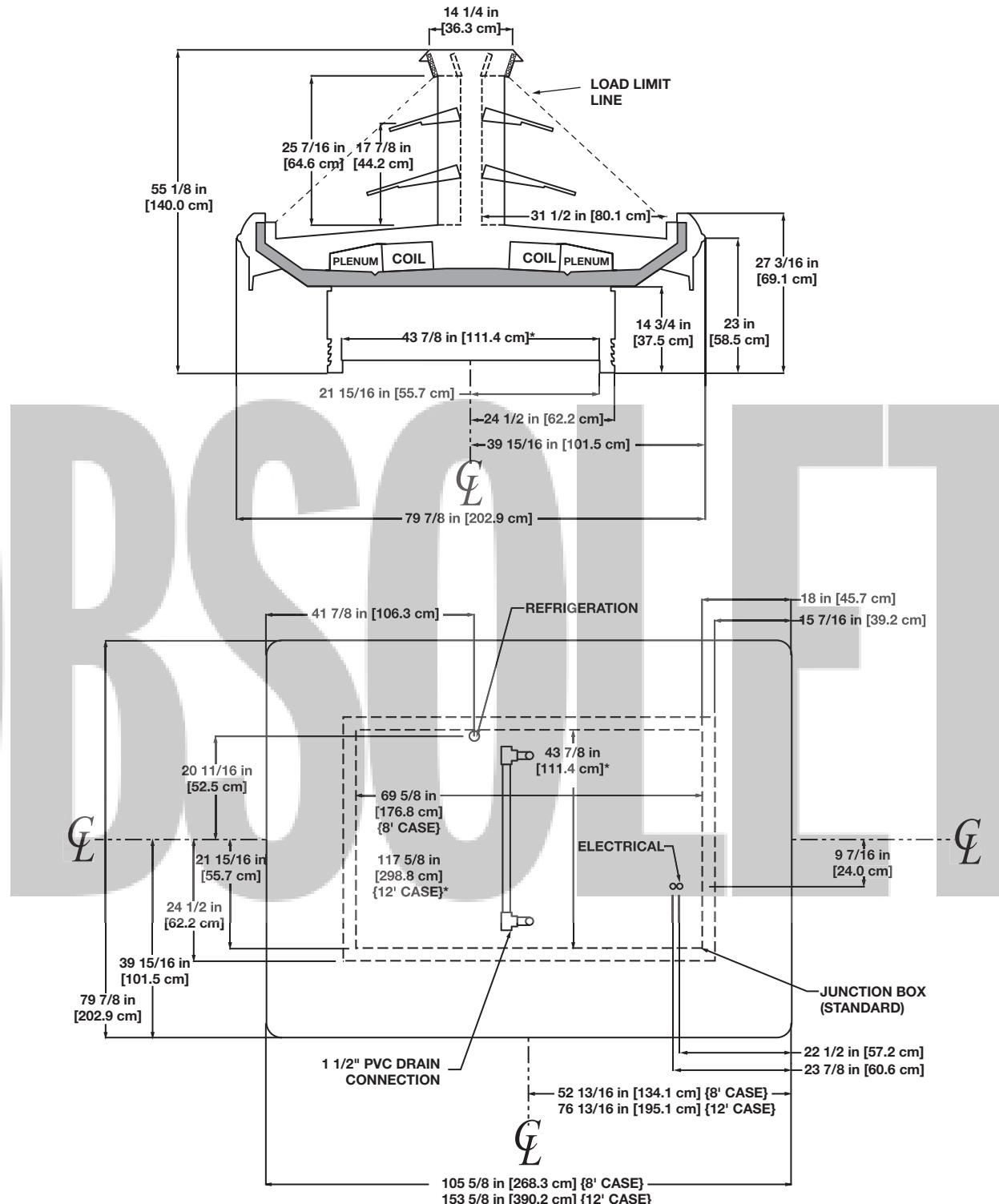
4 NOTE: “- - -” indicates not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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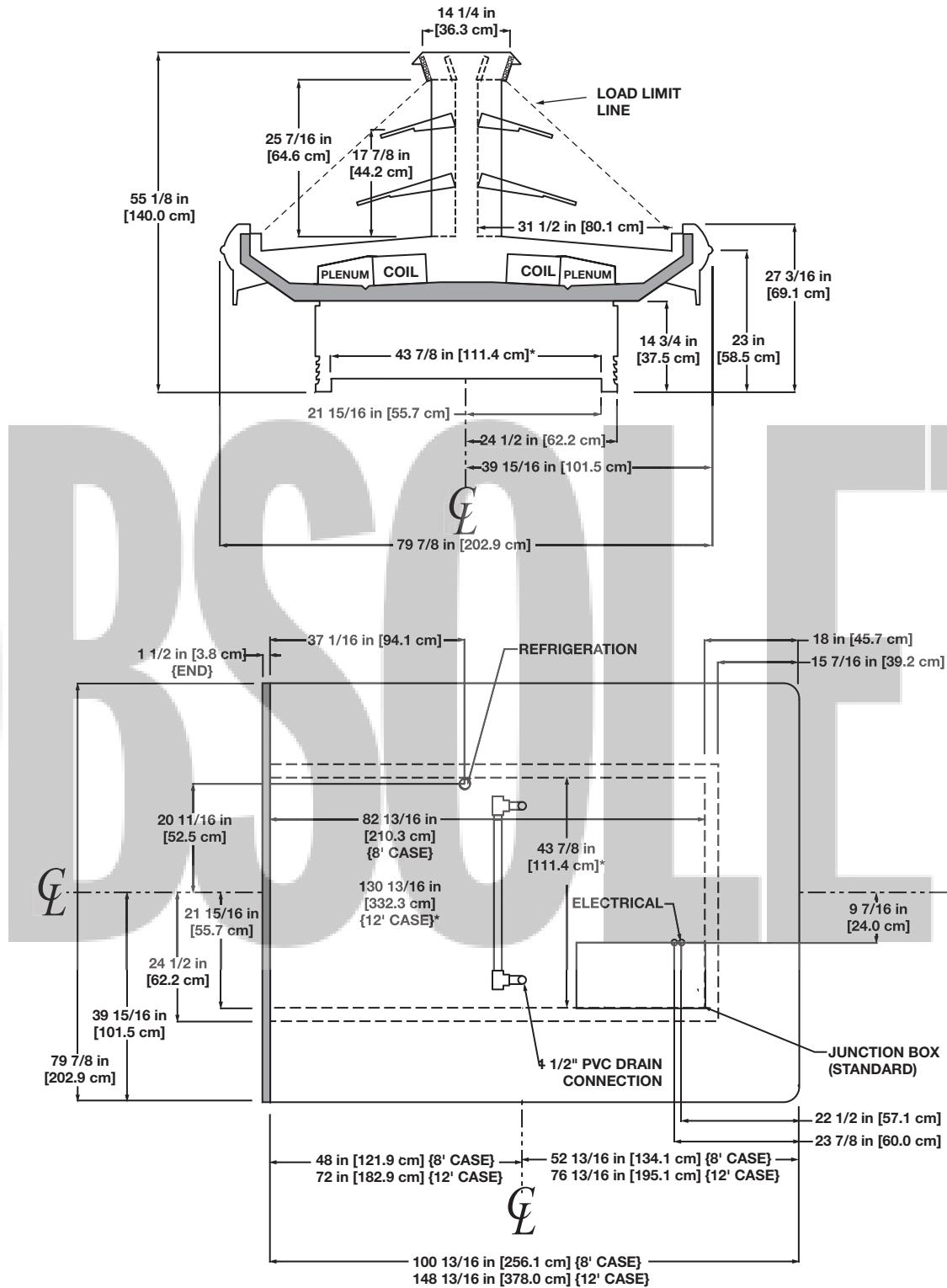
Produce

NOTES:

* STUB-UP AREA

- FRONT AND CENTER SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- AVAILABLE SHELF SIZES: 12" & 16"





OBSOLETE

Multi-Deck Produce/Dairy/Deli/Meat Merchandiser

O3EIF - Island End Cap

Electrical Data

MODEL	Fans per Case	High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O3EIF	2	0.3	21	---	---	---	---	---	---

Lighting Data

Model	Lights per Row	Light Length	Clearvoyant LED Lighting (Per Light Row)					
			Fluorescent Lighting (Per Light Row)		Standard Power (Cornice)			
			120 Volts		120 Volts			
			Amps	Watts	Amps	Watts		
O3EIF	3	12"	0.15	16	0.03	3.0	0.05	6.0

Guidelines & Control Settings

Model	² BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Return Air (°F)	Discharge Air (°F)	Discharge ³ Air Velocity (FPM)
O3EIF	2600	6-8	22	40	30	235

Defrost Controls

Model	Defrost per Day	Electric Defrost		Timed-Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3EIF	4	---	---	40	47	---	---	---	---

1 NOTE: "---" indicates not an option on this case model.

2 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

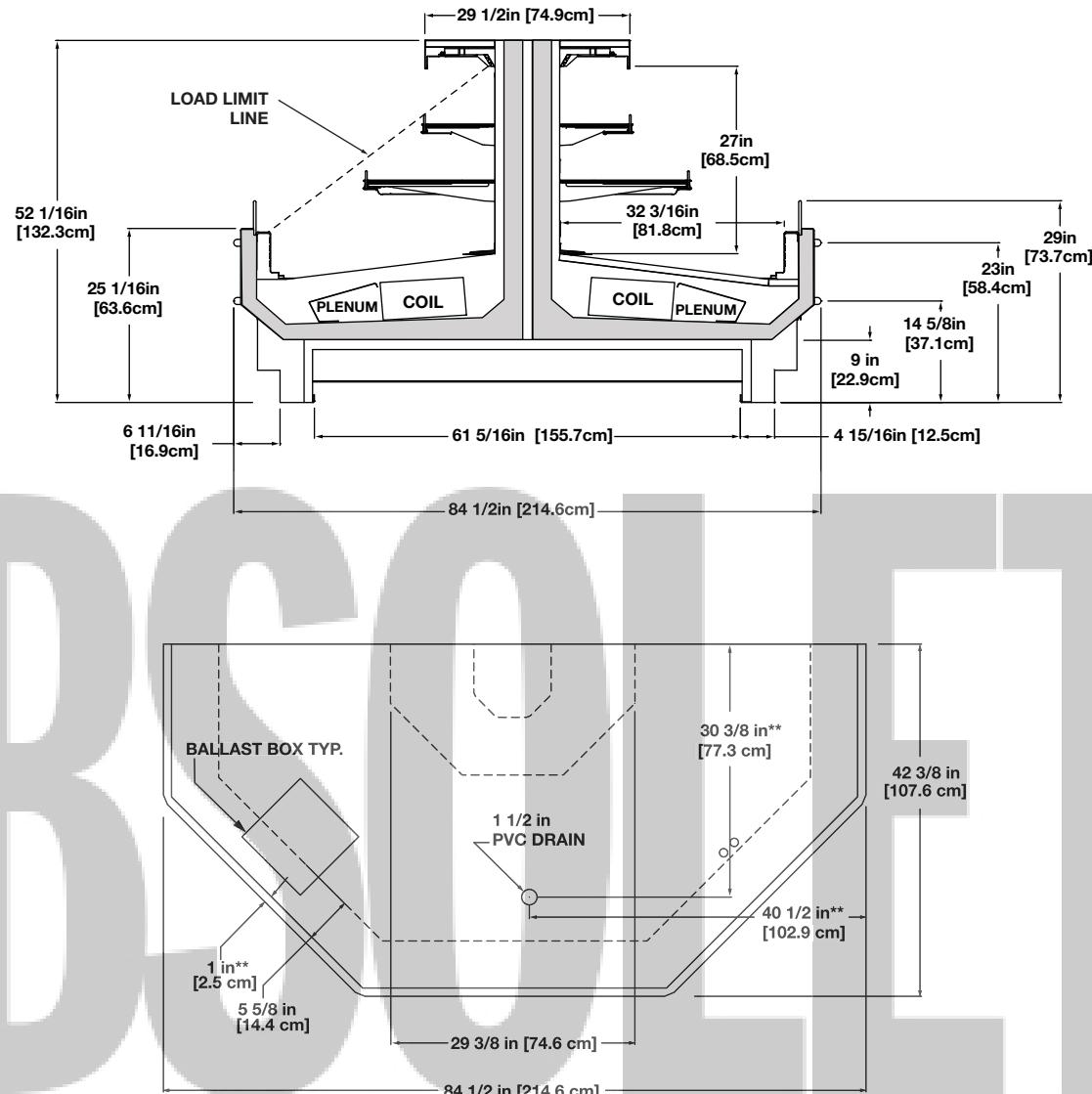
3 Average discharge air velocity at peak of defrost.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

- FRONT SILL HEIGHT AND OVERALL CASE HEIGHT VARY WITH BASEFRAME HEIGHT
- REFER TO O3UM FOR SUCTION AND LIQUID LINE SIZES
- SHELF SIZES BASED ON O3UM SHELF SELECTION
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

MULTI-DECK ISLAND

Produce/Dairy/Deli/Meat



Wide Island Multi-Deck Deli/Meat Merchandiser

O4ID - 8' & 12' (Double Wrap-Around End)

O4IDB - 6', 8' & 12' (Single Wrap-Around End)

O4IDBB - 8' (Double Joint End)

Electrical Data

Model	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Defrost Heaters			
		120 Volts		120 Volts		120 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O4ID	8'	6	3.00	180	0.70	42.0	0.67	80	7.70	1600	8.88
	12'	8	4.00	240	0.94	56.0	1.06	127	11.54	2400	13.32
O4IDB	6'	4	2.00	120	0.47	28.0	0.63	76	5.77	1200	6.66
	8'	6	3.00	180	0.70	42.0	0.88	106	7.70	1600	8.88
	12'	8	4.00	240	0.94	56.0	1.24	149	11.54	2400	13.32
O4IDBB	8'	6	3.00	180	0.70	42.0	0.91	109	7.70	1600	8.88
											2130

Lighting Data

Model	Lights per Row	Light Length	Fluorescent Lighting (Per Light Row)		Clearvoyant LED Lighting (Per Light Row)				
			120 Volts		Standard Power (Cornice or Shelf)		High Power (Cornice)		
			Amps	Watts	Amps	Watts	Amps	Watts	
O4ID	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6
O4IDB	6'	2	3'	0.37	44	0.14	16.6	0.30	35.8
	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4
	12'	3	4'	0.70	84	0.30	35.7	0.66	78.6
O4IDBB	8'	2	4'	0.47	56	0.20	23.8	0.44	52.4

Guidelines & Control Settings

Model	¹ BTUH/ft	Superheat Set Point @ Bulb (°F)	Evaporator (°F)	Discharge Air (°F)	Return Air (°F)	Discharge ² Air Velocity (FPM)
O4ID	1976	6-8	17	25	40	130
	1826	6-8	22	28	43	130
O4IDB	1976	6-8	17	25	40	130
	1826	6-8	22	28	43	130
O4IDBB	1677	6-8	17	25	40	130
	1571	6-8	22	28	43	130

Defrost Controls

Model	Defrosts per Day	Run-Off Time (min)	Electric Defrost		Timed-Off Defrost ³		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3IM-/B/-BB	4	6-8	30	47	45	45	26	45	---	---

1 BTUH/ft notes:

- Listed BTUH/ft indicate parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.
- Listed BTUH/ft indicate unlighted shelves. For T8 lighted shelves and 3rd row lighting, add 80 BTUH per 4' lighted shelf and 60 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case. For LED lighting, add 36 BTUH per 4' lighted shelf and 27 BTUH per 3' lighted shelf to determine Total Lighting BTUH Load, then divide the Total Lighting BTUH Load by the length of the case.
- Standard fans increase refrigeration load by 96 BTUH/fan.

2 Average discharge air velocity at peak of defrost.

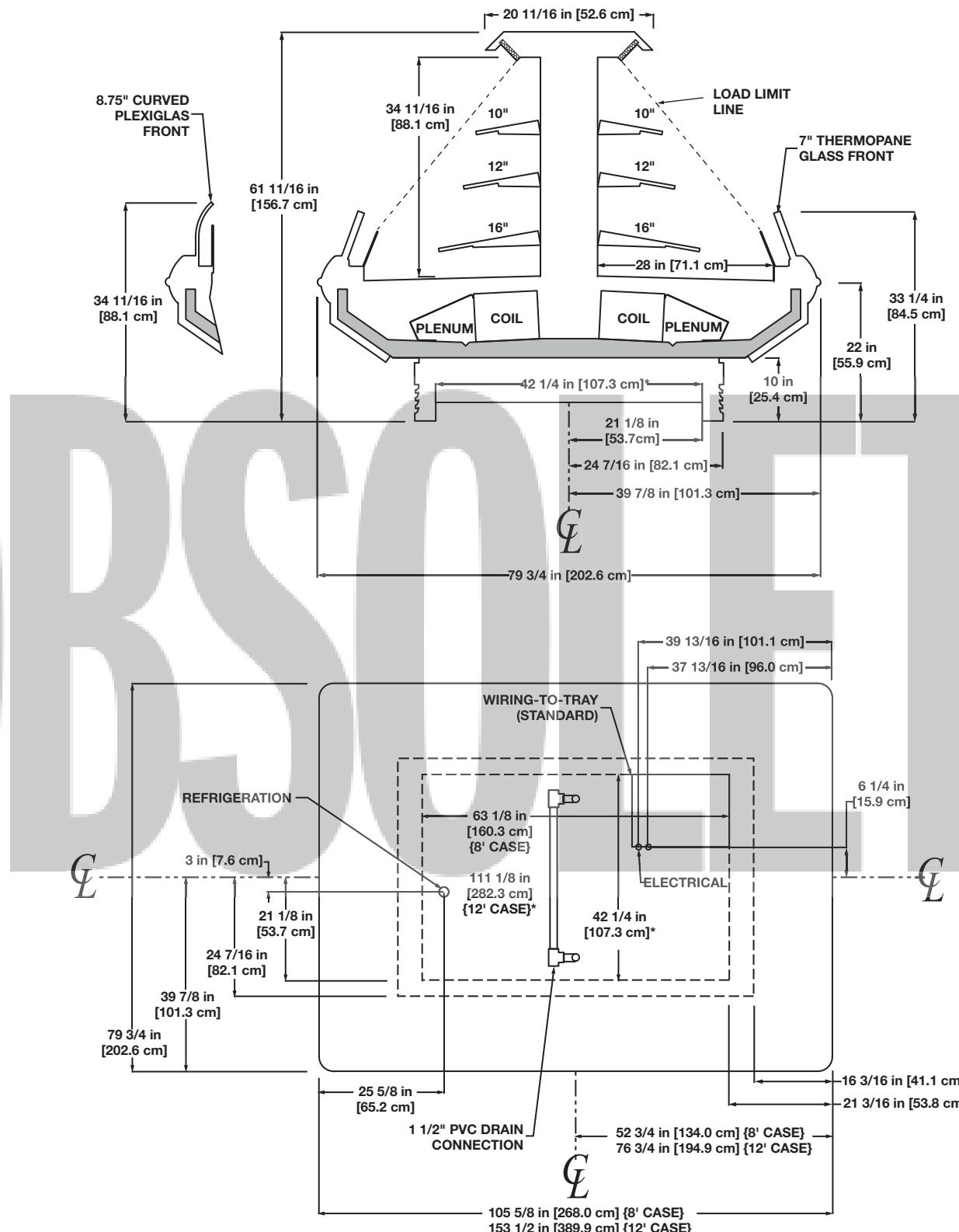
3 Only recommended with a High-Efficiency Coil with a 22°F evaporator temperature.

4 NOTE: “---” indicates not an option on this case model.

All measurements are taken per ARI 1200 - 2002 specifications.



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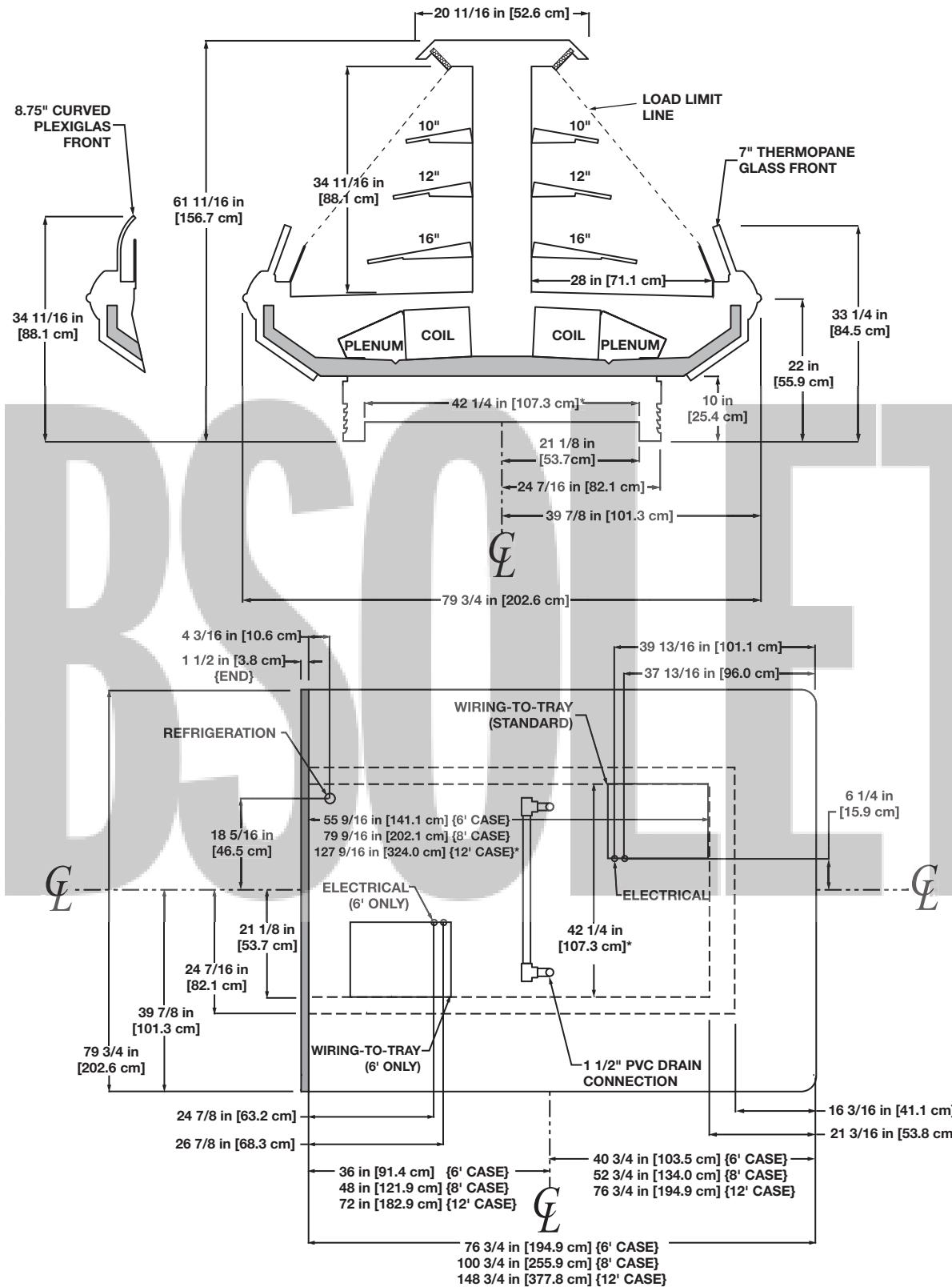
MULTI-DECK ISLAND
Deli

NOTES:

* STUB-UP AREA

- FRONT AND CENTER SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

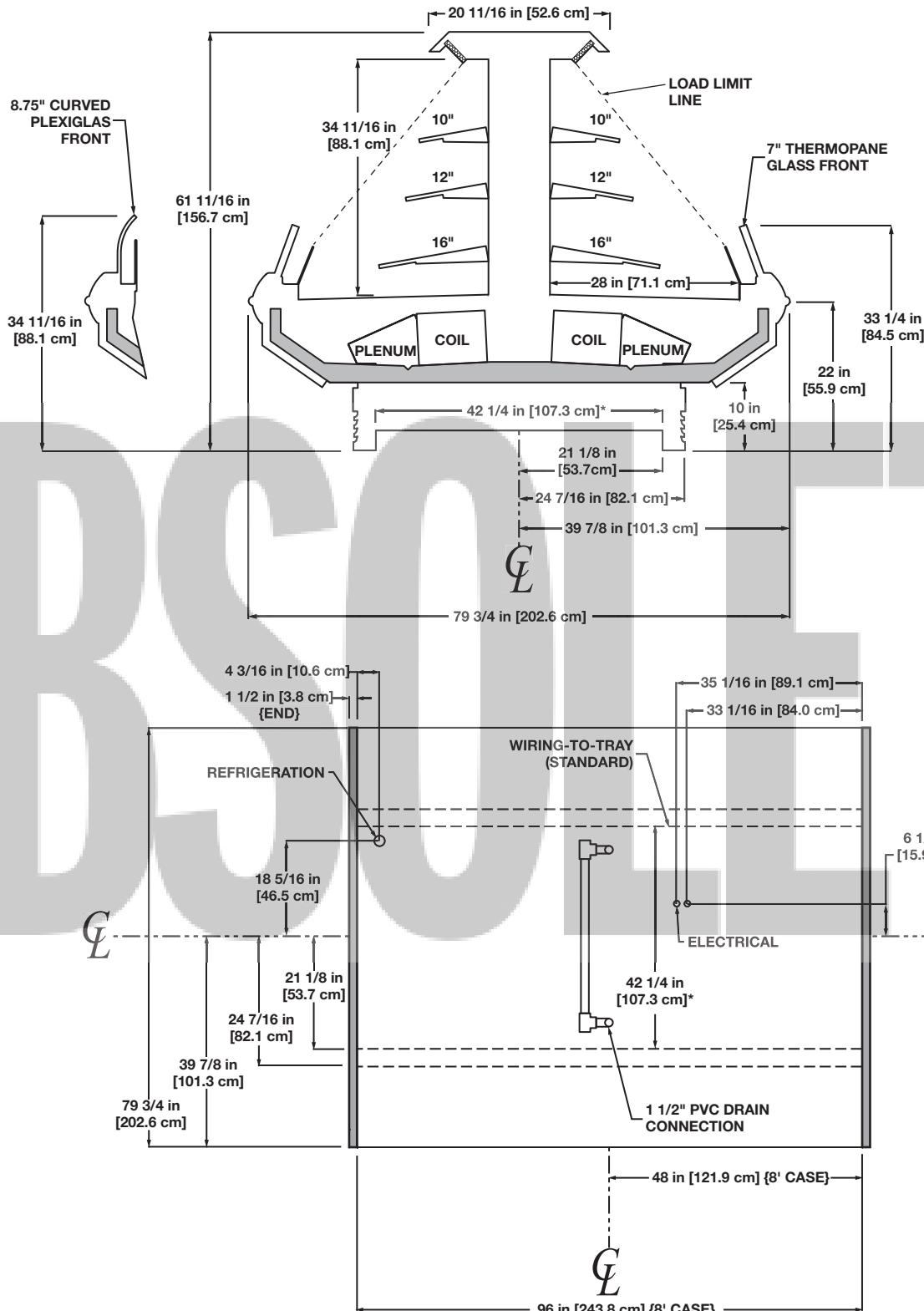


**NOTES:**

* STUB-UP AREA

- FRONT AND CENTER SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
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NOTES:

* STUB-UP AREA

- FRONT AND CENTER SILL HEIGHTS VARY WITH BASEFRAME HEIGHT
- SUCTION LINE - 7/8", LIQUID LINE - 3/8"
- AVAILABLE SHELF SIZES: 10", 12", 14" & 16"
- DASHED LINES SIGNIFY AREA INSIDE BASE RAIL BEHIND KICK-PLATE

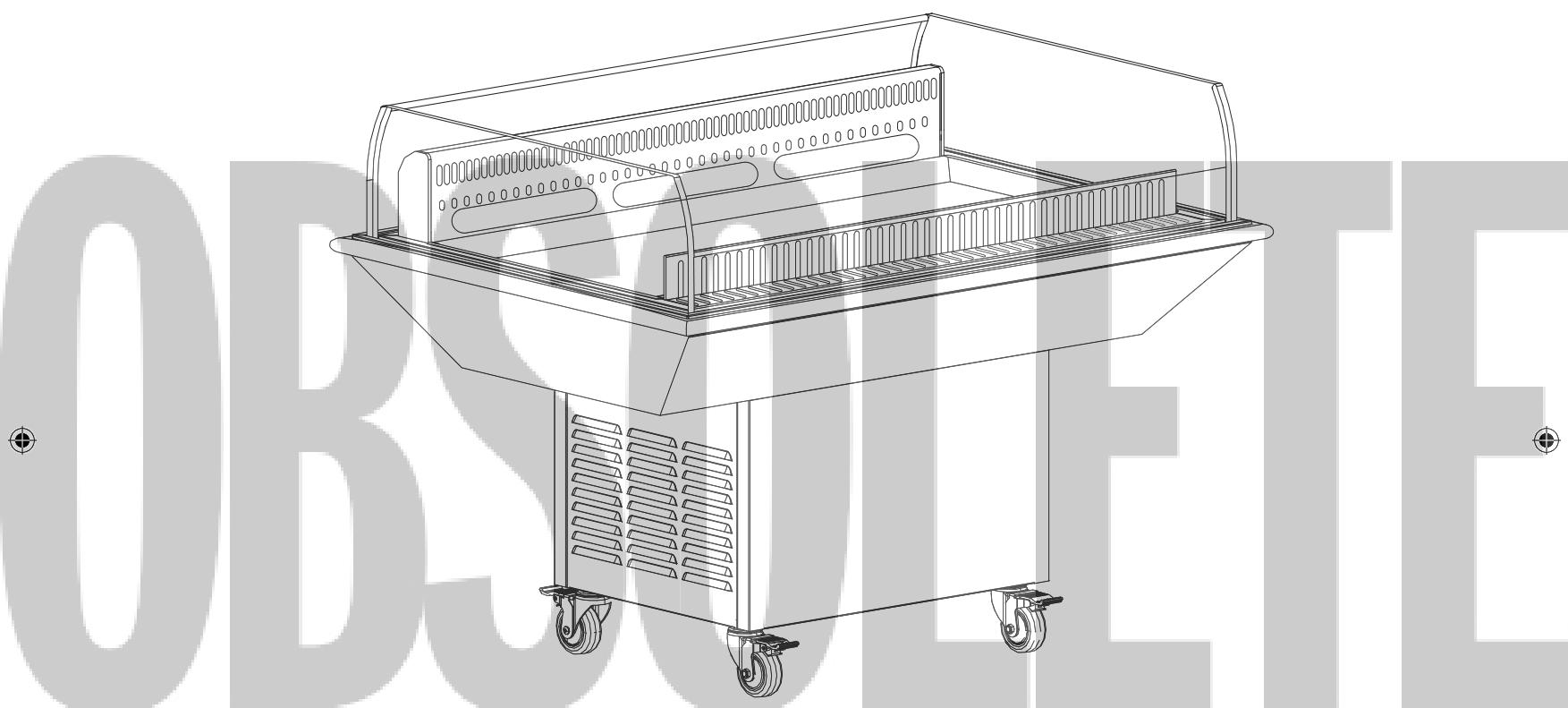


MULTI-DECK ISLAND

Deli

OBSOLETE

MOBILE SELF-CONTAINED



NOTES

- Cases shown with an ANSI/NSF* mark are listed by NSF.
- Cases shown with a UL* mark are listed by Underwriters Laboratories Inc.
- Allow for an extra 1/8" per joint when lining up merchandisers.
- Technical information contained herein is subject to change without notice.

* ANSI - American National Standard Institute
NSF - National Sanitation Foundation
UL - Underwriters Laboratories Inc

Single Deck Self-Contained Mobile Deli Merchandiser

MDCA - 4' & 6'

System Requirements

Model		Volts	Phase	Hz	Plug Style	Cord Length
MDCA	4'	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft
	6'	120	1	60	NEMA L5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
MDCA	4'	16.6	52	6-8	25	36
	6'		52	6-8	25	36

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
MDCA	4'	120	1	60	1/3	7.4	29.8	R404A
	6'	120	1	60	1/2	10.1	51.0	R404A

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
MDCA	4	35	47	- - ⁴	- - -	- - -	- - -	- - -	- - -

¹ Average discharge air velocity at peak of defrost.

² RLA = Running Load Amps

³ LRA = Locked Rotor Amps

⁴ NOTE: “- - -” not an option on this case model.

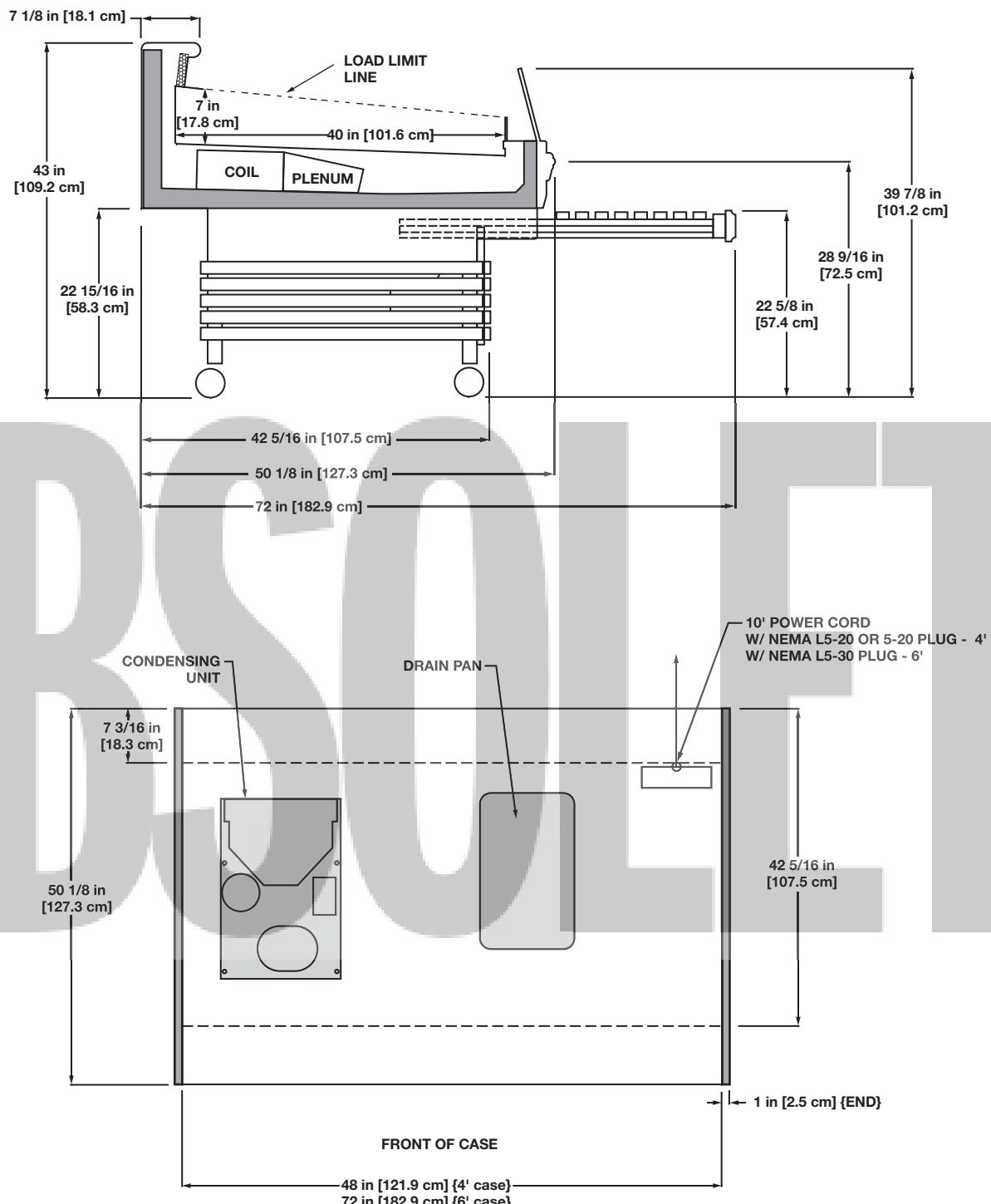
Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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**MOBILE
SELF-CONTAINED**
Deli



NOTES:

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- CASE BASEFRAME ALLOWS OVERALL HEIGHT TO BE LOWERED AS MUCH AS 6" IN 1" INCREMENTS



Single Deck Self-Contained Mobile Deli Merchandiser

MIDA - 4'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
MIDA	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
MIDA	7.85	60.5	6-8	24	36	70

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
MIDA	120	1	60	1/4	8.0	34.6	R404A	2.1

Defrost Controls

Model	Defrosts Per Day	Run-Off Time (min)	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
MIDA	4	6-8	---	45	47	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

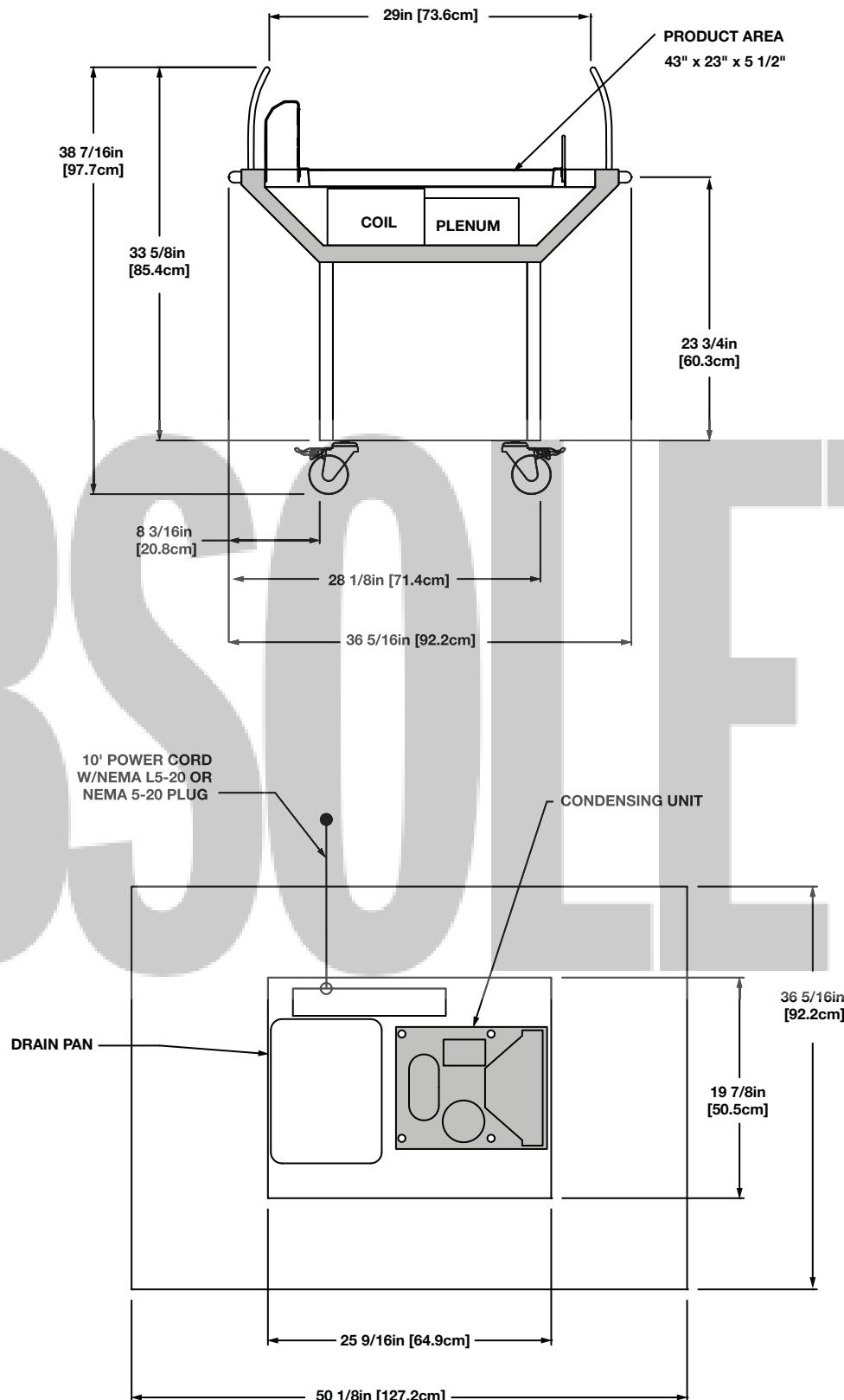
4 NOTE: "---" not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



MOBILE
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Single Deck Self-Contained Mobile Deli/Meat Merchandiser

MMCA-4', 6' & 8'

System Requirements

Model		Volts	Phase	Hz	Plug Style	Cord Length
MMCA	4'	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft
	6'	120	1	60	NEMA L5-30	10 ft
	8'	120	1	60	NEMA L5-30	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
MMCA	4'	17.2	49	6-8	24	35
	6'		49	6-8	24	35
	8'		49	6-8	24	35

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
MMCA	4'	120	1	60	1/3	7.4	R404A	3.5
	6'	120	11	60	1/2	10.1	R404A	
	8'	120	1	60	1/2	10.1	R404A	

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
MMCA	3	35	47	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: " - " not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

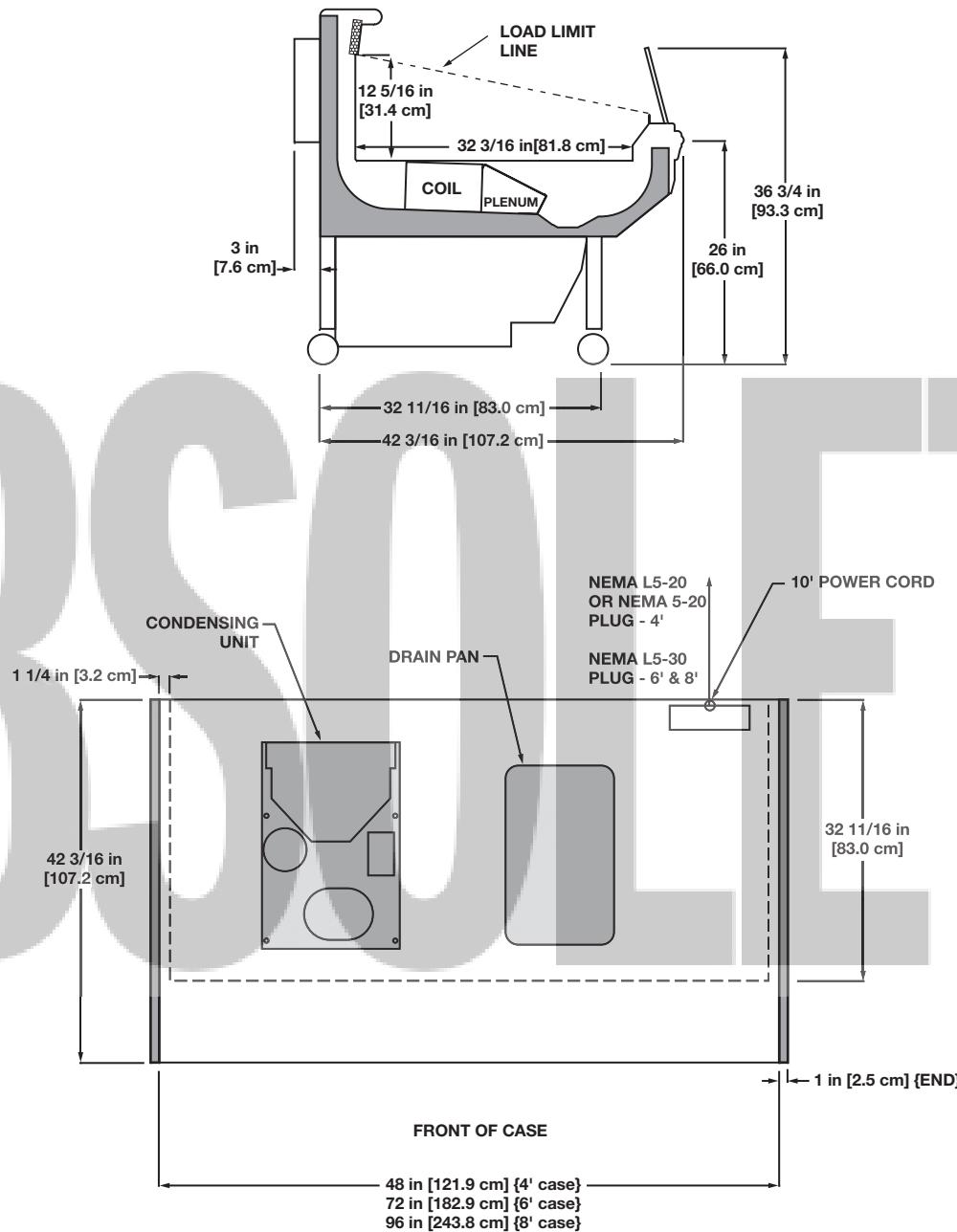
All measurements are taken per ARI 1200 - 2002 specifications.



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Deli/Meat



Single Deck Self-Contained Mobile Deli/Meat Merchandiser

MMRA - 2', 3', 4' & 6'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
MMRA	120	1	60	NEMA 5-20	6 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
MMRA		15	6-8	29	39	180

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
MMRA	2'	120	1	60	1/4	4.94	25	134A 1.75
	3'	120	1	60	1/4	7.20	29	134A 1.94
	4'	120	1	60	1/3	9.30	36	134A 3.00
	6'	120	1	60	1/2	9.00	51	134A 3.38

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
MMRA	4	---	---	30	47	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: “---” not an option on this case model.

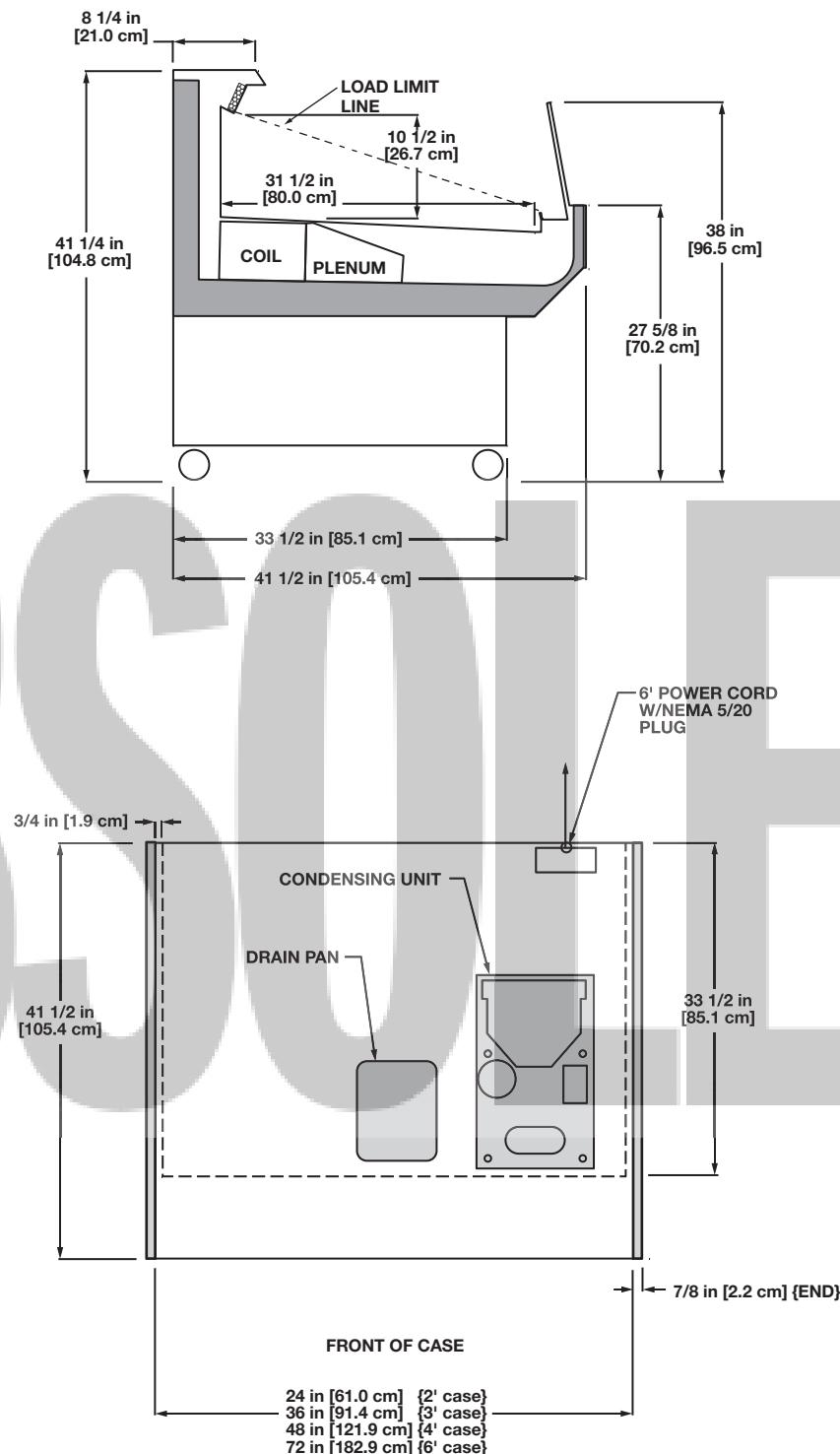
Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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NOTE:
ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT



Single Deck Self-Contained Mobile Produce Merchandiser

MPCA - 8'

System Requirements

Model		Volts	Phase	Hz	Plug Style	Cord Length
MPCA	8'	120	1	60	NEMA L5-30	10 ft

Guidelines & Control Settings

Model		24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
MPCA	8'		19.9	6-8	30	42	163

Condensing Unit Data

Model		Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
MPCA	8'	120	1	60	1/2	12.9	66.3	R134A	

Defrost Controls

Model	Defrosts Per Day	Run-Off Time (min)	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
MPCA	3	6-8	40	49	60	47	- - - ⁴	- - -	- - -	- - -

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

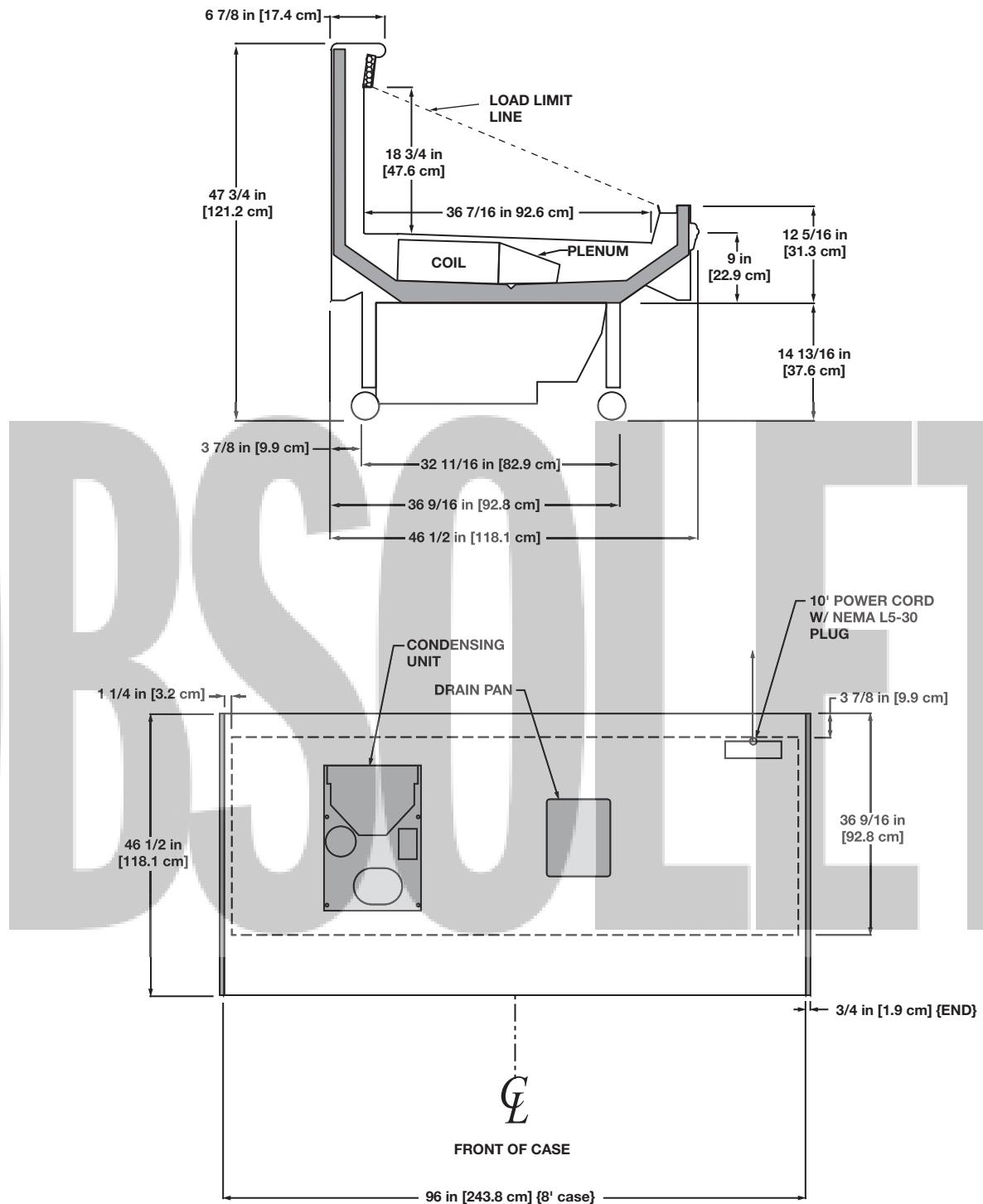
4 NOTE: " - - - " not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



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**NOTES:**

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT



International Style Self-Contained Mobile Deli/Meat/Seafood Merchandiser

OSIOA-4'

System Requirements

Model		Volts	Phase	Hz	Plug Style	Cord Length
OSIOA	4'	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
OSIOA	4'	14.1	12-14	6-8	26	34

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
OSIOA	4'	120	1	60	1/2	10.4	R134A	3.25

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OSIOA	4	40	47	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

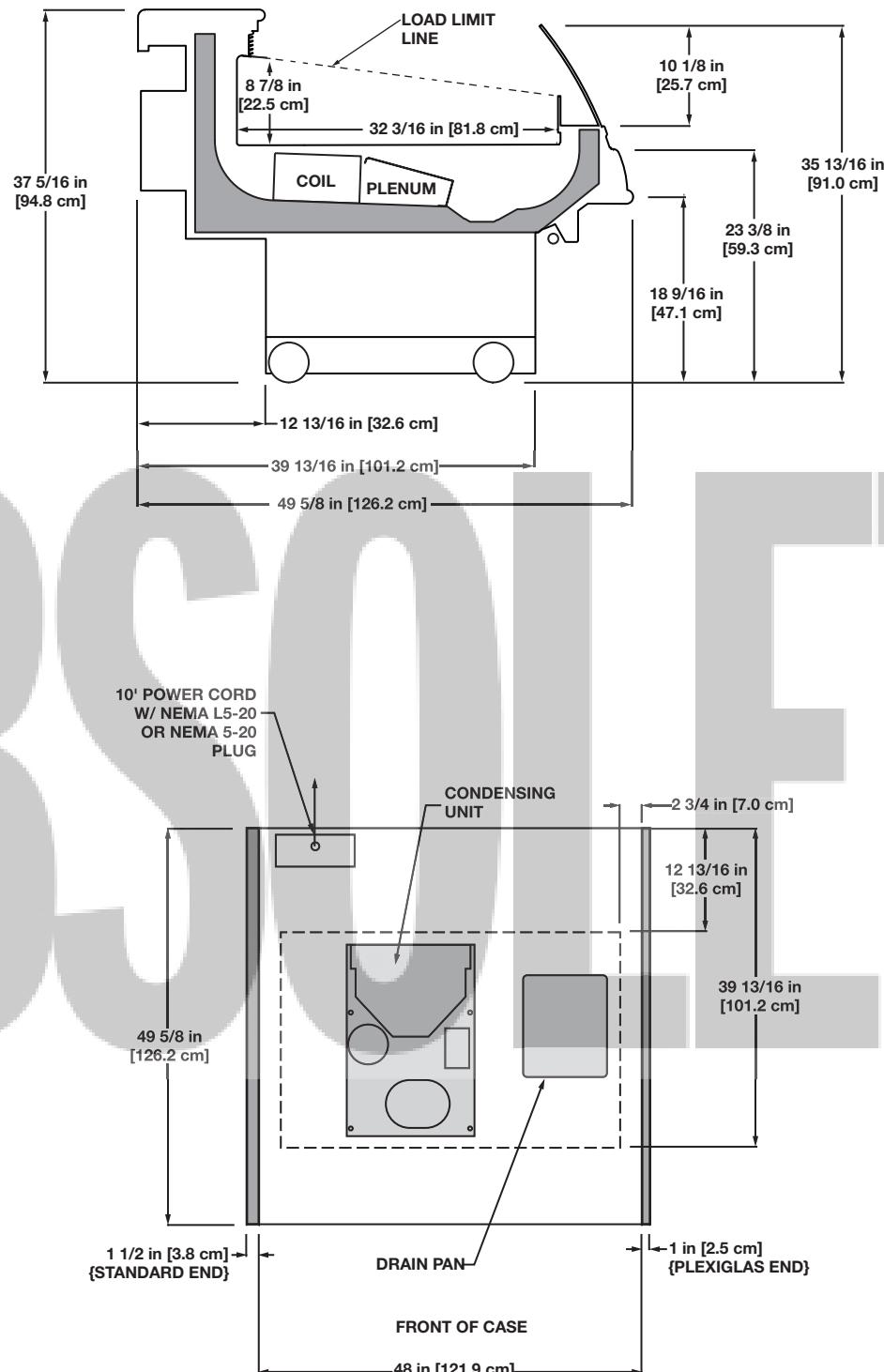
All measurements are taken per ARI 1200 - 2002 specifications.



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Deli/Meat/Seafood



NOTES:

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT



International Style Self-Contained Mobile Deli/Meat/Seafood Prep Merchandiser

OSIOPA-4'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
OSIOPA	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
OSIOPA Deli	13.6	20	6-8	34	36	200
OSIOPA Meat	18.0	16	6-8	32	36	200

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
OSIOPA	120	1	60	1/3	7.2	29.0	R134A	2.25

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OSIOPA	2	40	47	- - - ⁴	- - -	- - -	- - -	- - -	- - -

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: " - - - " not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

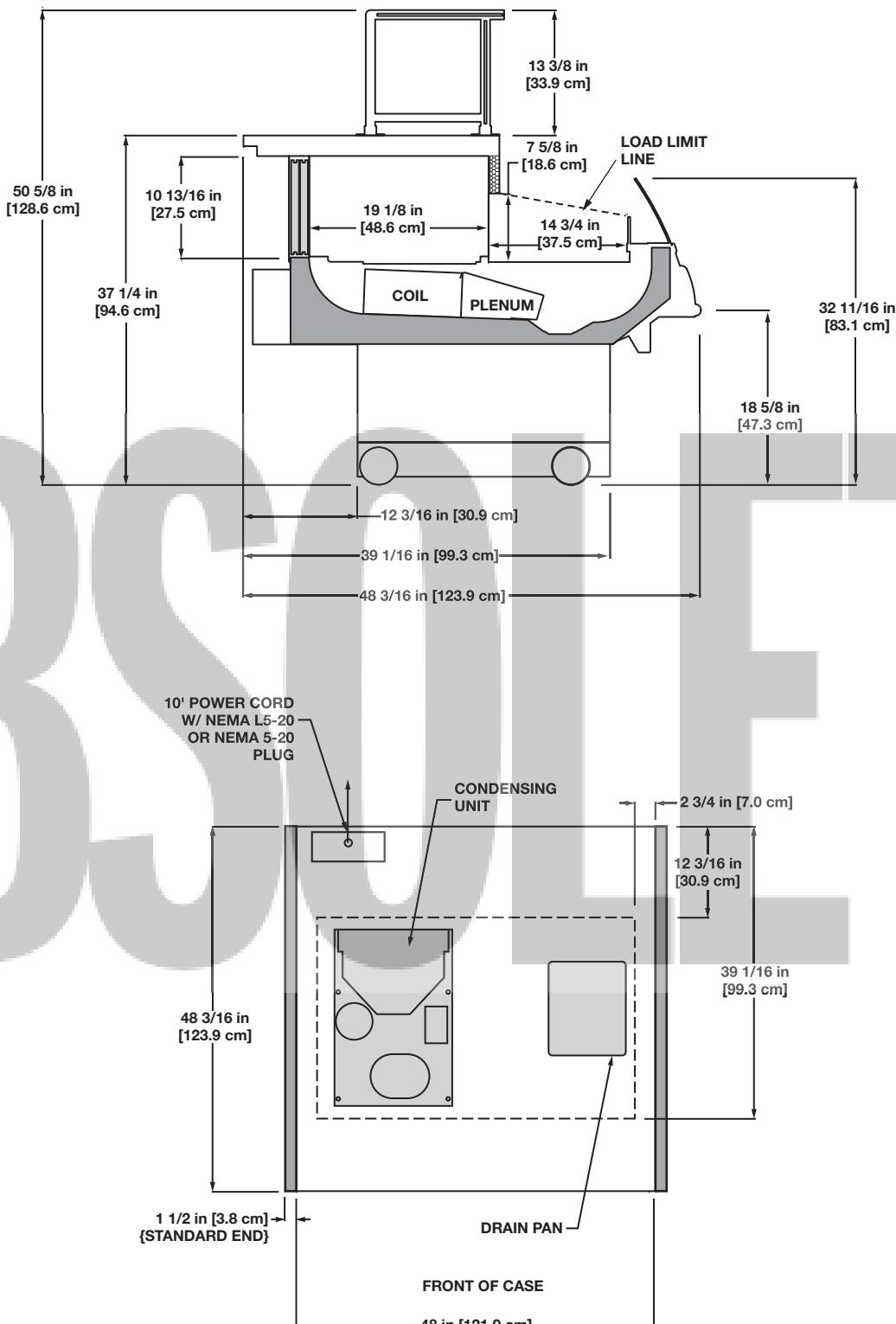
All measurements are taken per ARI 1200 - 2002 specifications.



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**MOBILE
SELF-CONTAINED**

Deli/Meat/Seafood



NOTES:

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT



International Style Self-Contained Mobile Sushi Prep Merchandiser

OSIOA-P-4'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
OSIOA-P	120	1	60	NEMA 5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
OSIOA-P	32.0	12-14	6-8	26	34	182

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
OSIOA-P	120	1	60	3/4	15.2	66.3	R134A	

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OSIOA-P	4	40	47	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

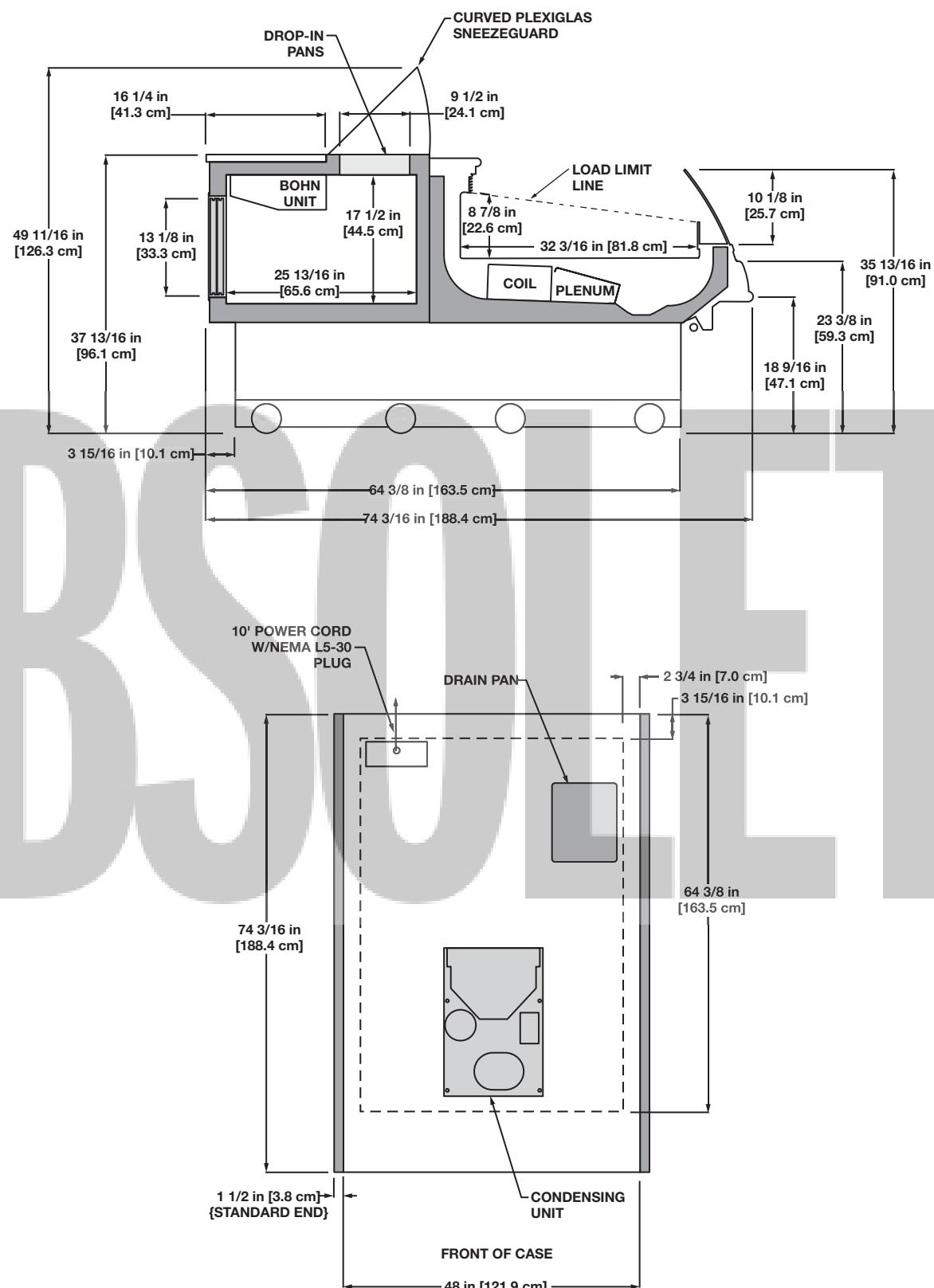
3 LRA = Locked Rotor Amps

4 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.





NOTES:

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT



International Style Self-Contained Mobile Dual Temp. Merchandiser OSIOZA-4'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
OSIOZA	120	1	60	NEMA 5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
OSIOZA	25.0	12-14	3-4	-24	-10	220

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
OSIOZA	120	1	60	3/4	10.9	85.5	R404A	3.75

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OSIOA-P	2	45	45	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: “---” not an option on this case model.

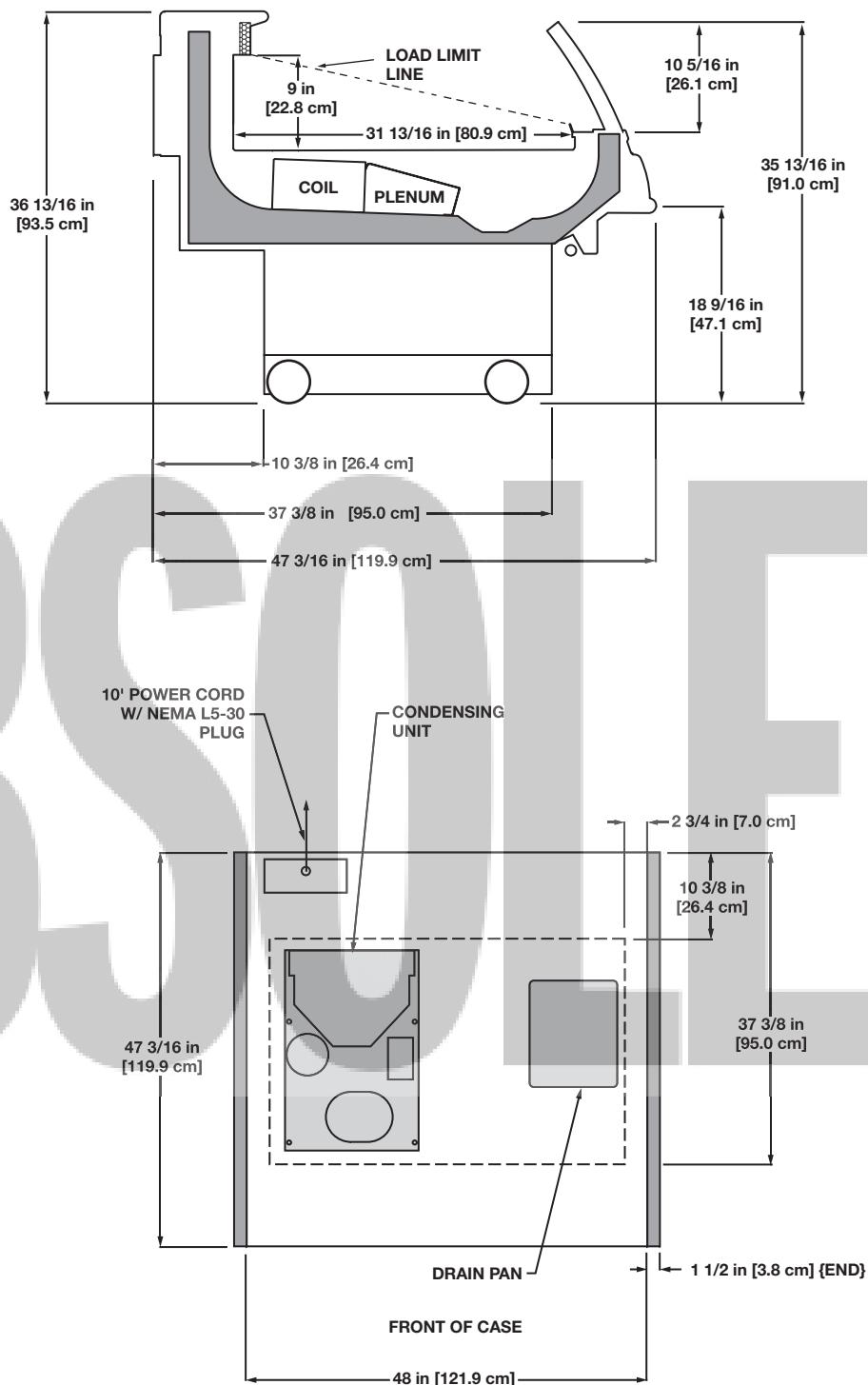
Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
EXCELLLENCE®
A DOVER COMPANY

**MOBILE
SELF-CONTAINED**
Dual Temp.

**NOTES:**

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT



Single Deck Self-Contained Mobile Boxed Produce Merchandiser

UPA-8'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
UPA	120	1	60	NEMA 5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
UPA	25.0	12-14	3-4	-24	-10	220

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
UPA	120	1	60	3/4	10.9	85.5	R404A	3.75

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
UPA	4	---	---	45	47	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: “---” not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

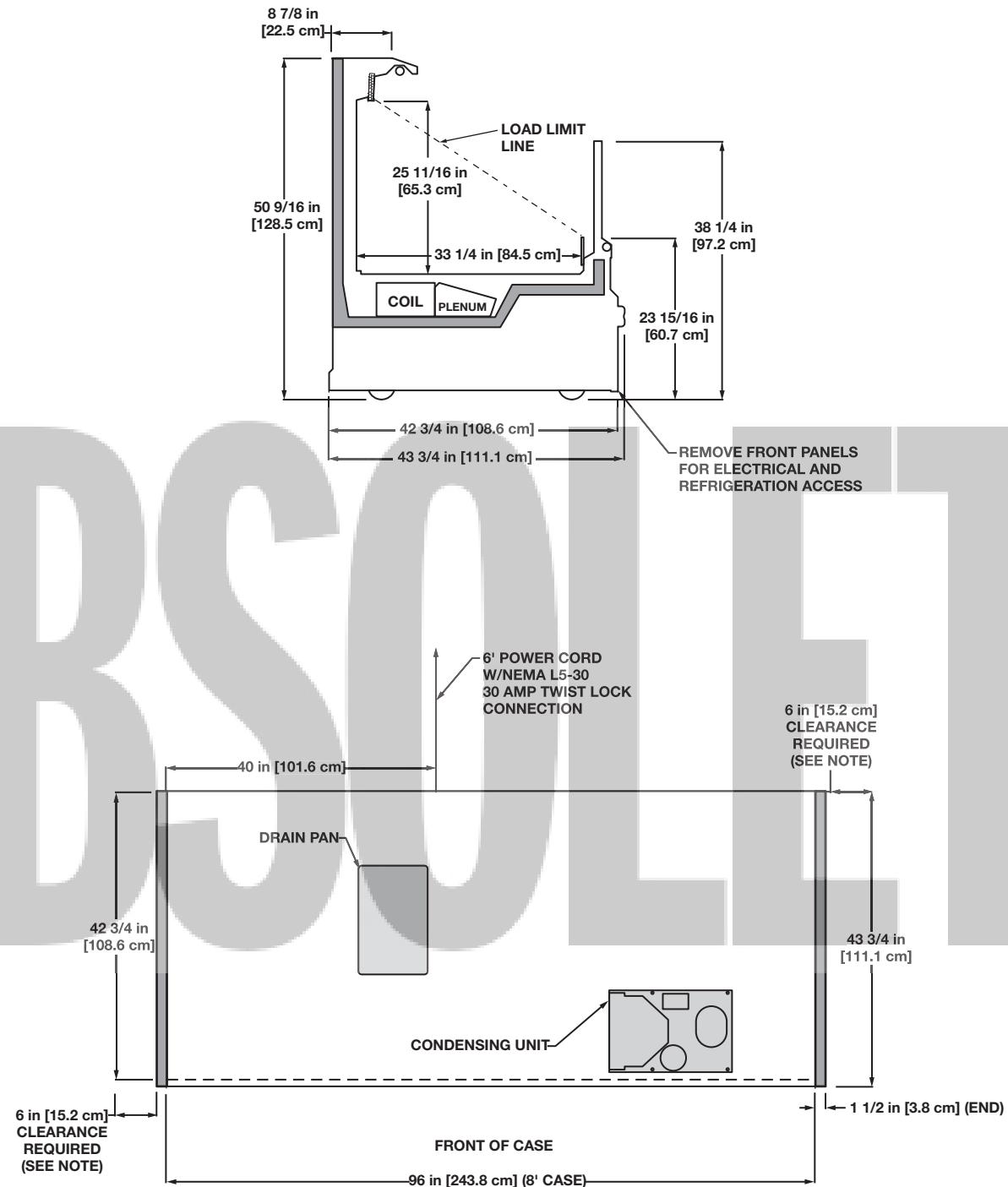
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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A DOVER COMPANY

**MOBILE
SELF-CONTAINED**

Boxed Produce



NOTES:

- CASE CLEARANCE: MINIMUM 6" FROM BOTH ENDS
- AVAILABLE SHELF SIZES: 10", 12", 14", & 16"



Multi-Deck Self-Contained Mobile Produce/Dairy/Deli/Meat Merchandiser

O2.5UMA - 4'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
O2.5UMA	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft

Guidelines & Control Settings

Model	Front Sill	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ² Air Velocity (FPM)
O2.5UMA Produce	Standard ¹	32.3	12-14	6-8	29-30	40-42	228
O2.5UMA Deli	Solid/Ext.	30.2	12-14	6-8	25-27	39-41	230
O2.5UMA Meat	Thermopane	30.3	12-14	6-8	25-26	36-38	226

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ³ (amps)	LRA ⁴ (amps)	Refrig.	Lbs. of Refrig.
O2.5UMA	120	1	60	1/2	12.9	66.3	R134A	3.6

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O2.5UMA	3	40	47	---	---	---	---	---	---

1 NOTE: when ordering the standard front, a 4" piece of straight Plexiglas must be placed

2 Average discharge air velocity at peak of defrost.

3 RLA = Running Load Amps

4 LRA = Locked Rotor Amps

5 NOTE: "---" not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

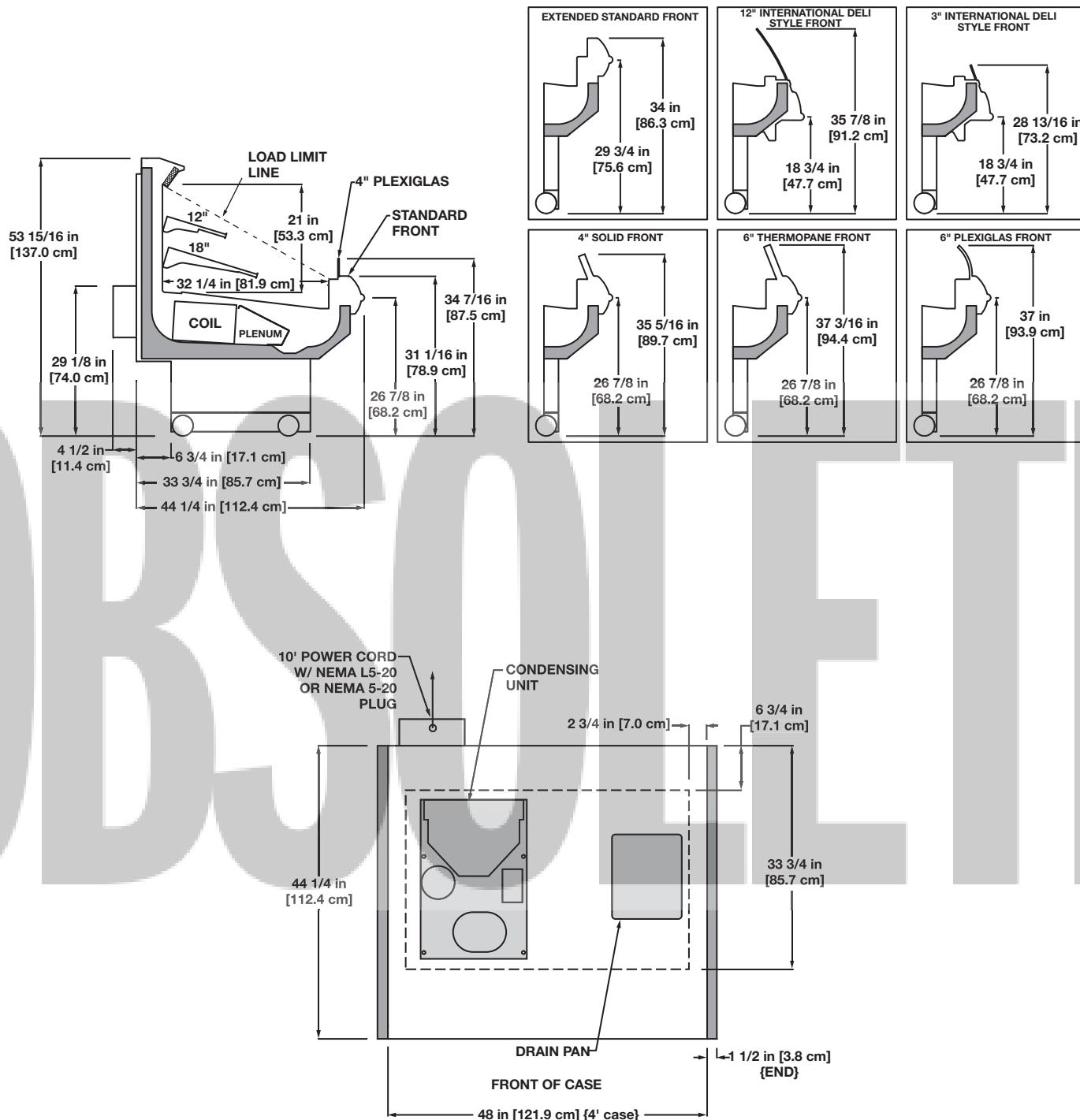
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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**MOBILE
SELF-CONTAINED**

Produce/Dairy/Deli/Meat



NOTES:

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12" & 1-18"



Multi-Deck Self-Contained Mobile Produce/Dairy/Deli/Meat Merchandiser

O3UMA - 4'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
O3UMA	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft

Guidelines & Control Settings

Model	Front Sill	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
O3UMA	Solid	32.1	12-14	3-4	26	35	230

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
O3UMA	120	1	60	1/2	12.9	66.3	R134A	3.6

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3UMA	3	40	47	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: “---” not an option on this case model.

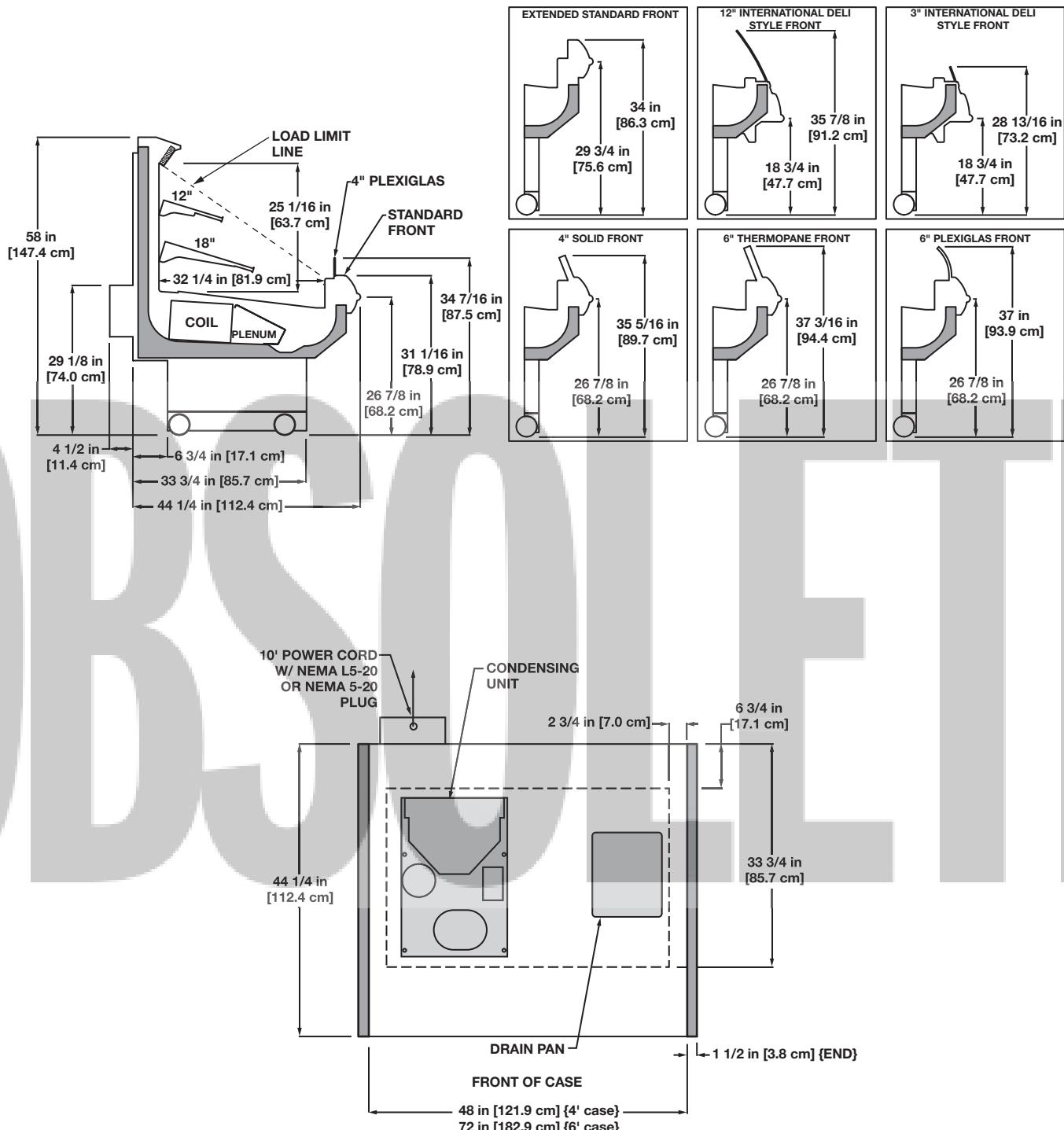
Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



**MOBILE
SELF-CONTAINED**

Produce/Dairy/Deli/Meat



NOTES:

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT
- AVAILABLE SHELF SIZES: 10", 12", 14", 16" & 18"
- PRODUCT ON TOP SHELF SHOULD BE 3" BELOW DISCHARGE
- RECOMMENDED SHELF CONFIGURATION IN ROWS: 1-12" & 1-18"



Multi-Deck Self-Contained Mobile Produce/Dairy/Deli/Meat Merchandiser

O3UMA-56" - 4'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
O3UMA-56"	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
O3UMA-56"	24.1	18-20	6-8	31	41	230

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
O3UMA-56"	120	1	60	1/2	10.2	51.0	R134A	2.84

Defrost Controls

Model	Defrosts Per Day	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
O3UMA-56"	6	40	47	---	---	---	---	---	---

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: “---” not an option on this case model.

All measurements are taken per ARI 1200 - 2002 specifications.



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O3UMA-56"

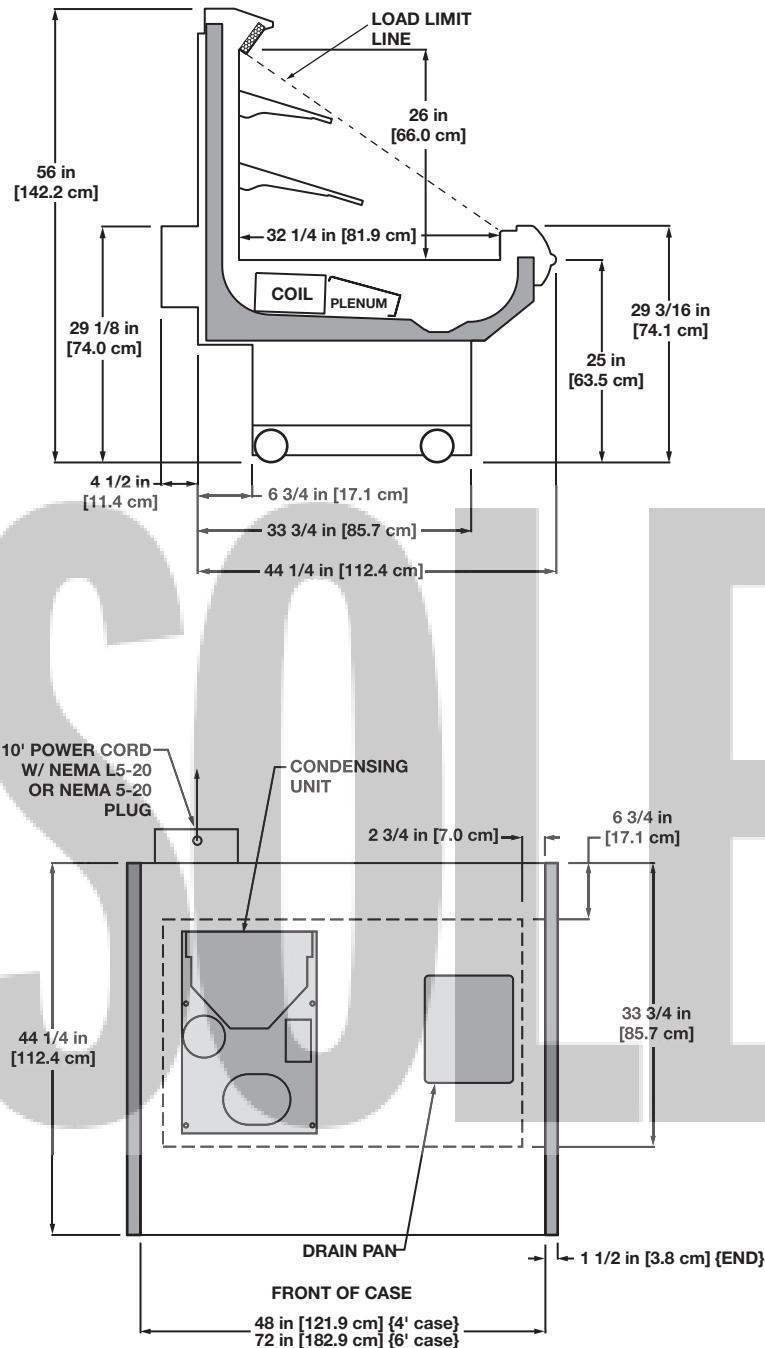
HILL PHOENIX®

E X C E L L E N C E

A DOVER® COMPANY

**MOBILE
SELF-CONTAINED**

Produce/Dairy/Deli/Meat



NOTE:
ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT



International Style Self-Contained Mobile Service Deli/Meat/Seafood Merchandiser

OSIA-4'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
OSIA	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
OSIA		12-14	6-8	26	34	175

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
OSIA	120	1	60	1/3	7.2	29.0	R134A	2.25

Defrost Controls

Model	Electric Defrost			Timed Off Defrost		Hot Gas Defrost			Reverse Air Defrost	
	Defrosts Per Day	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	
OSIA	2	45	47	---	---	---	---	---	---	

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: "---" not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

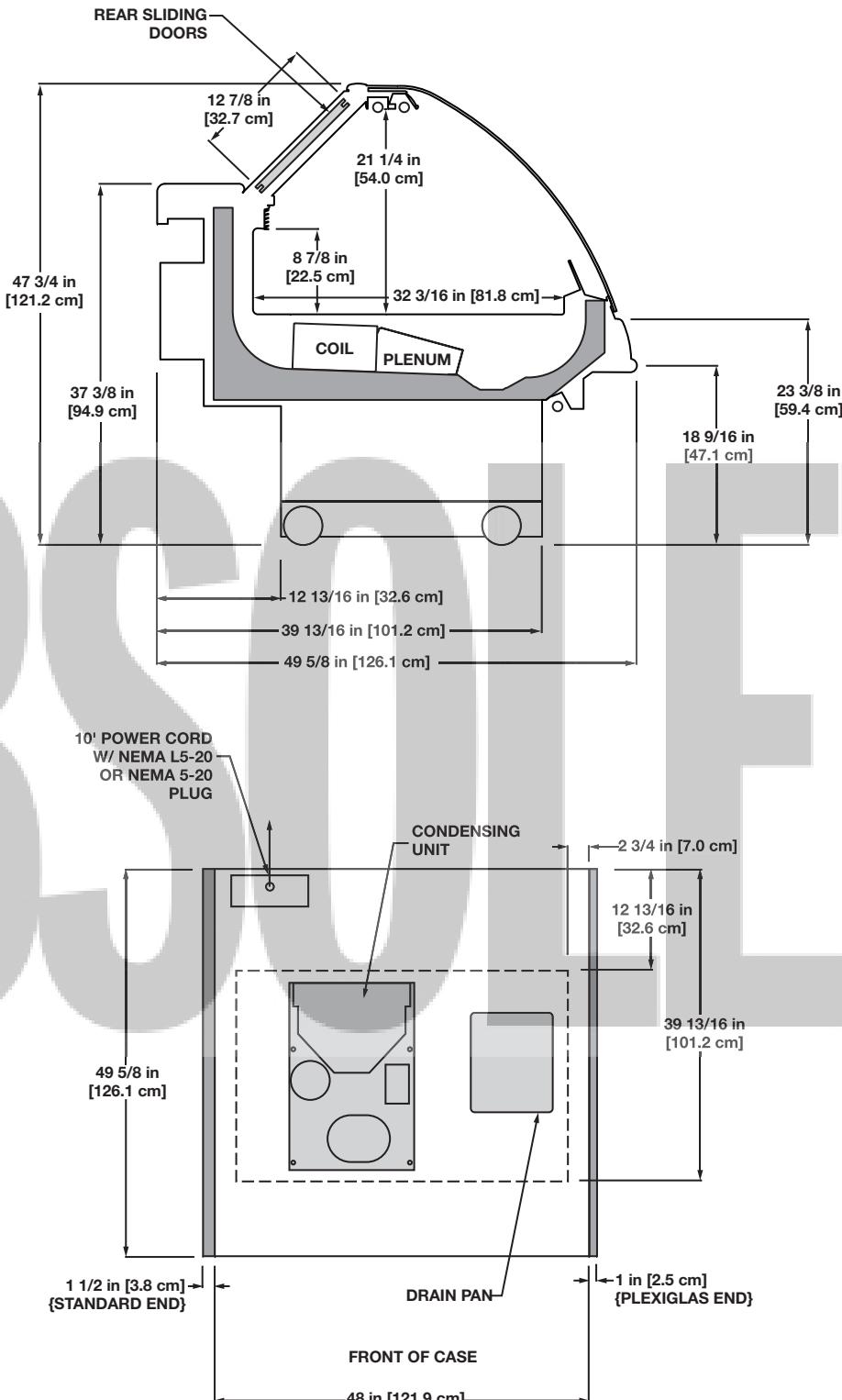
All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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**MOBILE
SELF-CONTAINED**

Deli/Meat/Seafood



NOTES:

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT



International Style Self-Contained Mobile Service Deli/Meat/Seafood Merchandiser

O2SIA-4'

System Requirements

Model	Volts	Phase	Hz	Plug Style	Cord Length
O2SIA	120	1	60	NEMA L5-20 or NEMA 5-20	10 ft

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ¹ Air Velocity (FPM)
O2SIA	14.02	16	6-8	24	35	240

Condensing Unit Data

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Lbs. of Refrig.
O2SIA	120	1	60	1/3	7.2	29.0	R134A	2.25

Defrost Controls

Model	Electric Defrost			Timed Off Defrost		Hot Gas Defrost			Reverse Air Defrost	
	Defrosts Per Day	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	
O2SIA	3	45	50	---	---	---	---	---	---	

1 Average discharge air velocity at peak of defrost.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 NOTE: "---" not an option on this case model.

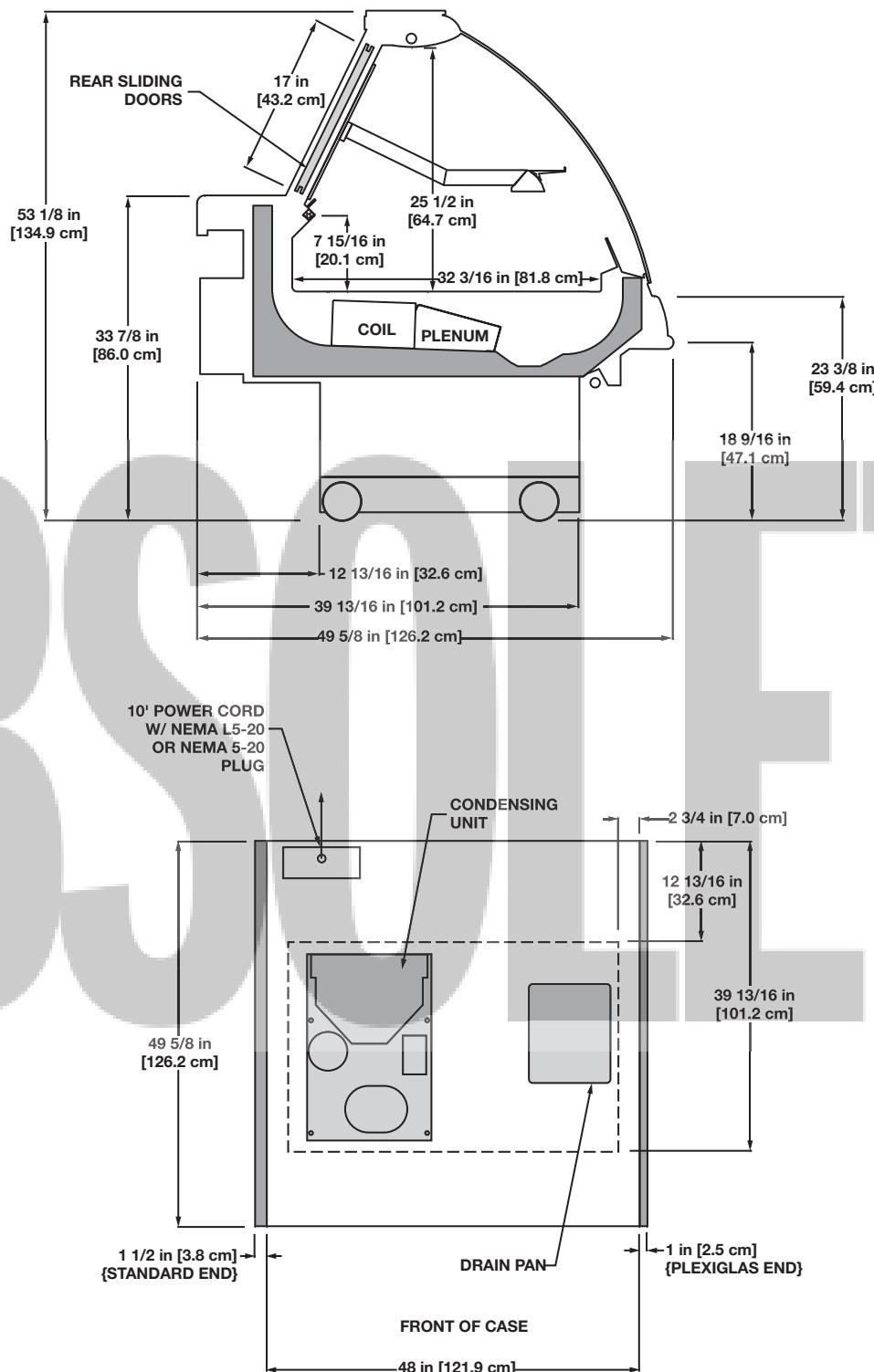
Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.



HILL PHOENIX
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**MOBILE
SELF-CONTAINED**
Deli

**NOTES:**

- ENDS ADD APPROXIMATELY 1 INCH TO CASE HEIGHT



Single Deck Self-Contained Frozen Food Merchandiser

OWZA - 8'

System Requirements

Model	Volts	Phase	Hz	Plug ¹ Style	Cord Length
OWZA - 8'	230	1	60	L14-30P	10'

Condensing Unit Data (2 units/case)

Model	Volts	Phase	Frequency (Hz)	HP	RLA ² (amps)	LRA ³ (amps)	Refrig.	Condenser Fans		Lbs. of Refrig.
								Amps ⁴	Watts	
OWZA - 8' (med temp)	208-230	1	60	3/4	7.7	37.0	R404A	1.4	70	5
OWZA - 8' (low temp)	208-230	1	60	1-1/2	15.4	74.0	R404A	2.8	140	10

Guidelines & Control Settings

Model	24hr Energy Usage (kWh)	Suction Pressure @ Case Outlet (psig)	Superheat Set Point @ Bulb (F°)	Discharge Air (F°)	Return Air (F°)	Discharge ⁵ Air Velocity (FPM)
OWZA - 8' (med temp)	9.3	60.8	6 - 8	25.7	33.3	200
OWZA - 8' (low temp)	13.5	16.3	6 - 8	-17	3	200

Defrost Controls

Model	Defrosts Per Day	Electric Defrost ⁶		Timed Off Defrost ⁷		Hot Gas Defrost		Reverse Air Defrost	
		Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)	Fail-Safe (min)	Termination Temp (°F)
OWZA - 8' (med temp)	3	---	50	46	---	---	---	---	---
OWZA - 8' (low temp)	2	50	46	50	46	---	---	---	---

1 For export cases, a NEMA L6-30 electrical plug is used.

2 RLA = Running Load Amps

3 LRA = Locked Rotor Amps

4 Amps shown are included in RLA rating.

5 Average discharge air velocity at peak of defrost.

6 Low temperature defrost

7 Medium temperature defrost

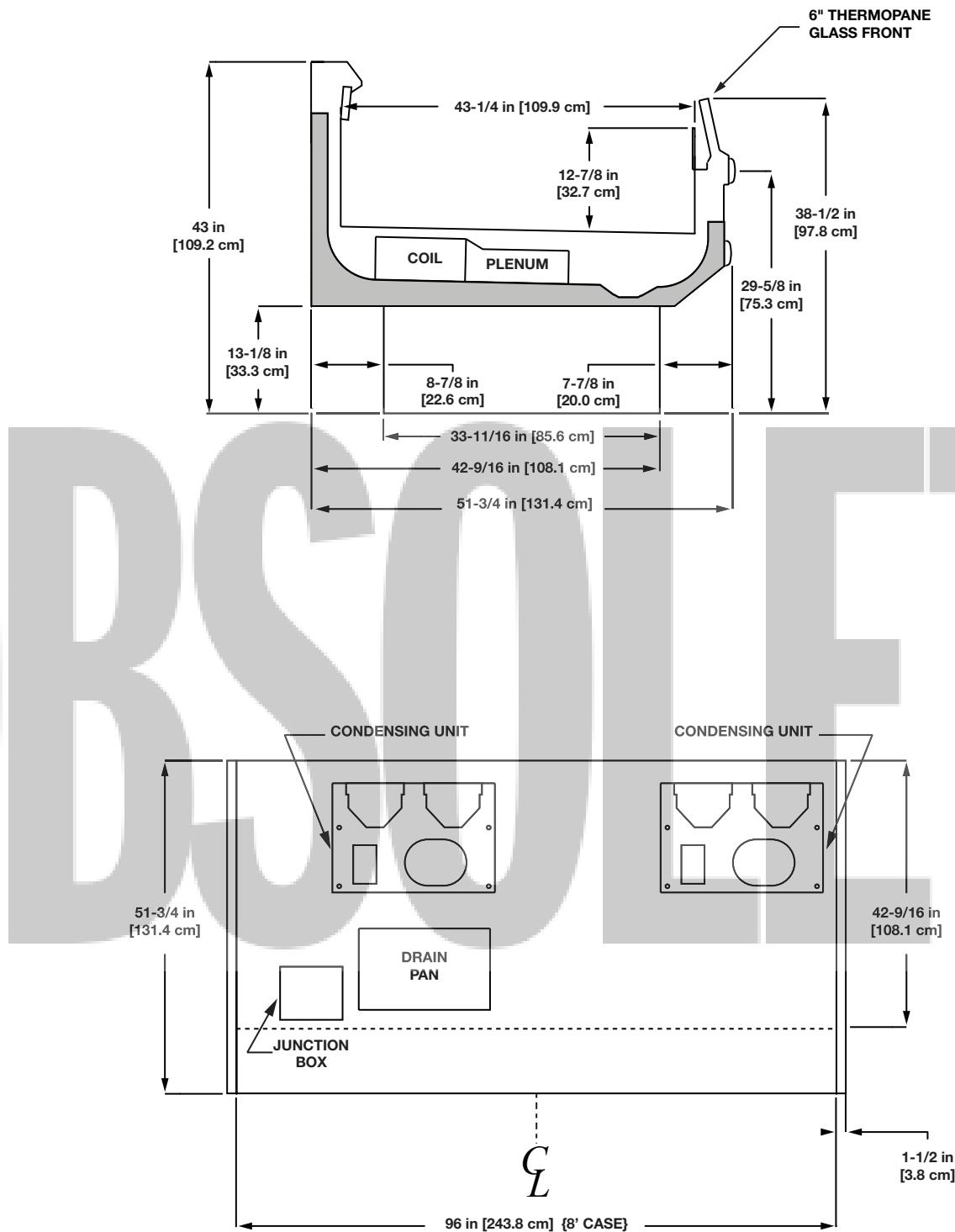
8 NOTE: "---" not an option on this case model.

Medium Temperature Defrost Schedule	
Defrost per Day	Time
1	12 midnight
2	12am - 12pm
3	6am - 2pm - 10pm
4	12am - 6am - 12pm - 6pm

All measurements are taken per ARI 1200 - 2002 specifications.

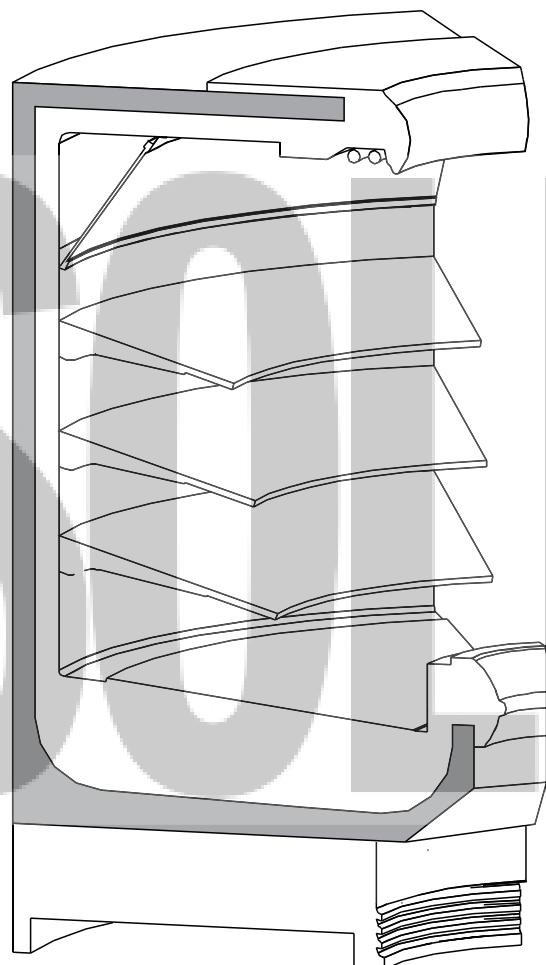


**MOBILE
SELF-CONTAINED**
Frozen Food



OBSOLETE

CURVED CASES



NOTES

- Allow for an extra 1/8" per joint when lining up merchandisers.
- Technical information contained herein is subject to change without notice.

Curved Case Merchandisers

30°, 45°, 60°, & 90° Inside and Outside

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Case Model	Wedge Model	Volume (ft³)	¹BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OC	30° I/S	7.5	550	22	1	0.80	53	0.36	36	0.15 ⁴	18	---	---
	45° I/S	11.3	820	22	1	0.80	53	0.36	36	0.21 ⁴	25	---	---
	60° I/S	15.1	1090	22	1	0.80	53	0.36	36	0.26 ⁴	31	---	---
	90° I/S	22.6	1630	22	2	1.60	107	0.72	71	0.39 ⁴	47	---	---
	30° O/S	6.5	480	22	1	0.80	53	0.36	36	0.04 ⁴	5	---	---
	45° O/S	9.8	710	22	1	0.80	53	0.36	36	0.05 ⁴	6	---	---
	60° O/S	13.1	950	22	1	0.80	53	0.36	36	0.08 ⁴	10	---	---
	90° O/S	19.6	1420	22	2	1.60	107	0.72	71	0.10 ⁴	12	---	---

Case Model	Wedge Model	Volume (ft³)	¹,³BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OM	30° I/S	6.6	570	22	1	0.80	53	0.36	36	0.15 ⁴	18	0.75	90
	45° I/S	9.9	850	22	1	0.80	53	0.36	36	0.21 ⁴	25	0.75	90
	60° I/S	13.3	1140	22	1	0.80	53	0.36	36	0.26 ⁴	31	1.50	180
	90° I/S	19.9	1700	22	2	1.60	107	0.72	71	0.39 ⁴	47	1.50	180
	30° O/S	6.1	530	22	1	0.80	53	0.36	36	0.04 ⁴	5	0.75	90
	45° O/S	9.2	790	22	1	0.80	53	0.36	36	0.05 ⁴	6	0.75	90
	60° O/S	12.2	1050	22	1	0.80	53	0.36	36	0.08 ⁴	10	1.50	180
	90° O/S	18.3	1570	22	2	1.60	107	0.72	71	0.10 ⁴	12	1.50	180

Case Model	Wedge Model	Volume (ft³)	²BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OP	30° I/S	6.1	410	29	1	0.80	53	0.36	36	---	---	---	---
	45° I/S	6.2	620	29	1	0.80	53	0.36	36	---	---	---	---
	60° I/S	12.2	820	29	1	0.80	53	0.36	36	---	---	---	---
	90° I/S	18.4	1230	29	2	1.60	107	0.72	71	---	---	---	---
	30° O/S	5.4	360	29	1	0.80	53	0.36	36	---	---	---	---
	45° O/S	8.1	540	29	1	0.80	53	0.36	36	---	---	---	---
	60° O/S	10.8	720	29	1	0.80	53	0.36	36	---	---	---	---
	90° O/S	16.1	1080	29	2	1.60	107	0.72	71	---	---	---	---

Case Model	Wedge Model	Volume (ft³)	²BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OP	30° I/S	7.0	580	29	1	0.80	53	0.36	36	---	---	---	---
	45° I/S	10.5	860	29	1	0.80	53	0.36	36	---	---	---	---
	60° I/S	14.0	1150	29	1	0.80	53	0.36	36	---	---	---	---
	90° I/S	21.0	1720	29	2	1.60	107	0.72	71	---	---	---	---
	30° O/S	5.8	480	29	1	0.80	53	0.36	36	---	---	---	---
	45° O/S	8.7	720	29	1	0.80	53	0.36	36	---	---	---	---
	60° O/S	11.6	950	29	1	0.80	53	0.36	36	---	---	---	---
	90° O/S	17.4	1430	29	2	1.60	107	0.72	71	---	---	---	---

¹ BTUHs listed are for parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.

² BTUHs listed are for parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.06.

³ Listed case BTUH indicates lighted shelves/cornice.

⁴ Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

Curved Case Merchandisers

30°, 45°, 60°, & 90° Inside and Outside

HILL PHOENIX
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Case Model	Wedge Model	Volume (ft ³)	1,2BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O2UM	30° I/S	7.8	1350	22	1	0.80	53	0.36	36	0.15 ³	18	1.55	186
	45° I/S	11.7	2030	22	1	0.80	53	0.36	36	0.21 ³	25	1.55	186
	60° I/S	15.6	2700	22	1	0.80	53	0.36	36	0.26 ³	31	1.90	288
	90° I/S	23.4	4050	22	2	1.60	107	0.72	71	0.39 ³	47	2.85	342
	30° O/S	6.5	1130	22	1	0.80	53	0.36	36	0.04 ³	5	1.55	186
	45° O/S	9.8	1690	22	1	0.80	53	0.36	36	0.05 ³	6	1.55	186
	60° O/S	13.0	2260	22	1	0.80	53	0.36	36	0.08 ³	10	1.90	288
	90° O/S	19.5	3380	22	2	1.60	107	0.72	71	0.10 ³	12	2.85	342

Case Model	Wedge Model	Volume (ft ³)	1,2BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O2.5UM	30° I/S	8.4	1450	22	1	0.80	53	0.36	36	0.15 ³	18	2.35	282
	45° I/S	12.7	2170	22	1	0.80	53	0.36	36	0.21 ³	25	2.35	282
	60° I/S	16.9	2890	22	1	0.80	53	0.36	36	0.26 ³	31	2.55	306
	90° I/S	25.3	4340	22	2	1.60	107	0.72	71	0.39 ³	47	4.45	534
	30° O/S	6.9	1190	22	1	0.80	53	0.36	36	0.04 ³	5	2.35	282
	45° O/S	10.4	1780	22	1	0.80	53	0.36	36	0.05 ³	6	2.35	282
	60° O/S	13.8	2370	22	1	0.80	53	0.36	36	0.08 ³	10	2.55	306
	90° O/S	20.7	3550	22	2	1.60	107	0.72	71	0.10 ³	12	4.45	534

Case Model	Wedge Model	Volume (ft ³)	1,2BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O3UM	30° I/S	9.3	1510	22	1	0.80	53	0.36	36	0.15 ³	18	2.35	282
	45° I/S	14.0	2260	22	1	0.80	53	0.36	36	0.21 ³	25	2.35	282
	60° I/S	18.7	3020	22	1	0.80	53	0.36	36	0.26 ³	31	2.55	306
	90° I/S	28.0	4520	22	2	1.60	107	0.72	71	0.39 ³	47	4.45	534
	30° O/S	7.5	1220	22	1	0.80	53	0.36	36	0.04 ³	5	2.35	282
	45° O/S	11.3	1830	22	1	0.80	53	0.36	36	0.05 ³	6	2.35	282
	60° O/S	15.1	2440	22	1	0.80	53	0.36	36	0.08 ³	10	2.55	306
	90° O/S	22.6	3650	22	2	1.60	107	0.72	71	0.10 ³	12	4.45	534

Case Model	Wedge Model	Volume (ft ³)	1,2BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O3.5UM	30° I/S	10.4	1880	22	1	0.80	53	0.36	36	0.15 ³	18	3.15	378
	45° I/S	15.7	2820	22	1	0.80	53	0.36	36	0.21 ³	25	3.15	378
	60° I/S	20.9	3760	22	1	0.80	53	0.36	36	0.26 ³	31	3.20	384
	90° I/S	31.3	5640	22	2	1.60	107	0.72	71	0.39 ³	47	6.05	726
	30° O/S	8.2	1480	22	1	0.80	53	0.36	36	0.04 ³	5	3.15	378
	45° O/S	12.3	2210	22	1	0.80	53	0.36	36	0.05 ³	6	3.15	378
	60° O/S	16.4	2950	22	1	0.80	53	0.36	36	0.08 ³	10	3.20	384
	90° O/S	24.6	4420	22	2	1.60	107	0.72	71	0.10 ³	12	6.05	726

1 BTUHs listed are for parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.09.

2 Listed case BTUH indicates lighted shelves/cornice.

3 Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

Curved Case Merchandisers

30°, 45°, 60°, & 90° Inside and Outside

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Case Model	Wedge Model	Volume (ft³)	1,3BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O4UM	30° I/S	12.1	2040	22	1	0.80	53	0.36	36	0.15 ⁴	18	3.15	378
	45° I/S	18.2	3060	22	1	0.80	53	0.36	36	0.21 ⁴	25	3.15	378
	60° I/S	24.3	4080	22	1	0.80	53	0.36	36	0.26 ⁴	31	3.20	384
	90° I/S	36.4	6120	22	2	1.60	107	0.72	71	0.39 ⁴	47	6.05	726
	30° O/S	9.4	1580	22	1	0.80	53	0.36	36	0.04 ⁴	5	3.15	378
	45° O/S	14.0	2360	22	1	0.80	53	0.36	36	0.05 ⁴	6	3.15	378
	60° O/S	18.7	3150	22	1	0.80	53	0.36	36	0.08 ⁴	10	3.20	384
	90° O/S	28.1	4720	22	2	1.60	107	0.72	71	0.10 ⁴	12	6.05	726

Case Model	Wedge Model	Volume (ft³)	1,3BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
O5UM	30° I/S	13.2	2090	22	1	0.80	53	0.36	36	0.15 ⁴	18	3.95	474
	45° I/S	19.8	3130	22	1	0.80	53	0.36	36	0.21 ⁴	25	3.95	474
	60° I/S	26.3	4170	22	1	0.80	53	0.36	36	0.26 ⁴	31	3.85	462
	90° I/S	39.5	6260	22	2	1.60	107	0.72	71	0.39 ⁴	47	7.65	918
	30° O/S	10.1	1600	22	1	0.80	53	0.36	36	0.04 ⁴	5	3.95	474
	45° O/S	15.1	2390	22	1	0.80	53	0.36	36	0.05 ⁴	6	3.95	474
	60° O/S	20.1	3190	22	1	0.80	53	0.36	36	0.08 ⁴	10	3.85	462
	90° O/S	30.2	4780	22	2	1.60	107	0.72	71	0.10 ⁴	12	7.65	918

Case Model	Wedge Model	Volume (ft³)	2,3BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting		
						120 Volts		120 Volts		120 Volts		120 Volts		
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O5DM	Deli	30° I/S	21.3	2020	22	1	0.80	53	0.36	36	---	---	5.00	600
		45° I/S	32.0	3030	22	1	0.80	53	0.36	36	---	---	5.00	600
		60° I/S	42.6	4030	22	1	0.80	53	0.36	36	---	---	5.25	630
		90° I/S	64.0	6050	22	2	1.60	107	0.72	71	---	---	10.00	1200
		30° O/S	20.5	1940	22	1	0.80	53	0.36	36	---	---	5.00	600
		45° O/S	30.8	2910	22	1	0.80	53	0.36	36	---	---	5.00	600
		60° O/S	41.0	3880	22	1	0.80	53	0.36	36	---	---	5.25	630
		90° O/S	61.5	5820	22	2	1.60	107	0.72	71	---	---	10.00	1200

Case Model	Wedge Model	Volume (ft³)	2,3BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting		
						120 Volts		120 Volts		120 Volts		120 Volts		
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
O5DM	Dairy	30° I/S	21.3	1890	26	1	0.80	53	0.36	36	---	---	5.00	600
		45° I/S	32.0	2840	26	1	0.80	53	0.36	36	---	---	5.00	600
		60° I/S	42.6	3780	26	1	0.80	53	0.36	36	---	---	5.25	630
		90° I/S	64.0	5670	26	2	1.60	107	0.72	71	---	---	10.00	1200
		30° O/S	20.5	1820	26	1	0.80	53	0.36	36	---	---	5.00	600
		45° O/S	30.8	2730	26	1	0.80	53	0.36	36	---	---	5.00	600
		60° O/S	41.0	3640	26	1	0.80	53	0.36	36	---	---	5.25	630
		90° O/S	61.5	5460	26	2	1.60	107	0.72	71	---	---	10.00	1200

¹ BTUHs listed are for parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.13.

² BTUHs listed are for parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.10.

³ Listed case BTUH indicates lighted shelves/cornice.

⁴ Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

Curved Case Merchandisers

30°, 45°, 60°, & 90° Inside and Outside

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Case Model	Wedge Model	Volume (ft³)	1,3BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OHM	30° I/S	17.3	1780	22	1	0.80	53	0.36	36	0.04 ⁴	5	3.95	474
	45° I/S	26.0	2660	22	1	0.80	53	0.36	36	0.10 ⁴	12	3.95	474
	60° I/S	34.6	3550	22	1	0.80	53	0.36	36	0.34 ⁴	41	4.10	492
	90° I/S	52.0	5320	22	2	1.60	107	0.72	71	0.32 ⁴	38	7.90	948
	30° O/S	16.2	1660	22	1	0.80	53	0.36	36	0.10 ⁴	12	3.95	474
	45° O/S	24.2	2480	22	1	0.80	53	0.36	36	0.14 ⁴	17	3.95	474
	60° O/S	32.3	3310	22	1	0.80	53	0.36	36	0.18 ⁴	22	4.10	492
	90° O/S	48.5	4960	22	2	1.60	107	0.72	71	0.28 ⁴	34	7.90	948

CURVED CASES

Case Model	Wedge Model	Volume (ft³)	1,3BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OHMH	30° I/S	18.3	1980	22	1	0.80	53	0.36	36	0.08 ⁴	10	4.75	570
	45° I/S	27.4	2970	22	1	0.80	53	0.36	36	0.20 ⁴	24	4.75	570
	60° I/S	36.6	3960	22	1	0.80	53	0.36	36	0.68 ⁴	82	4.75	570
	90° I/S	54.9	5940	22	2	1.60	107	0.72	71	0.64 ⁴	77	9.50	1140
	30° O/S	15.9	1730	22	1	0.80	53	0.36	36	0.20 ⁴	24	4.75	570
	45° O/S	23.9	2590	22	1	0.80	53	0.36	36	0.28 ⁴	34	4.75	570
	60° O/S	31.8	3450	22	1	0.80	53	0.36	36	0.36 ⁴	44	4.75	570
	90° O/S	47.8	5170	22	2	1.60	107	0.72	71	0.56 ⁴	68	9.50	1140

Case Model	Wedge Model	Volume (ft³)	2,3BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OHP	30° I/S	17.2	1650	26	1	0.80	53	0.36	36	---	---	3.95	474
	45° I/S	25.8	2470	26	1	0.80	53	0.36	36	---	---	3.95	474
	60° I/S	34.4	3300	26	1	0.80	53	0.36	36	---	---	4.10	492
	90° I/S	51.6	4940	26	2	1.60	107	0.72	71	---	---	7.90	948
	30° O/S	16.1	1550	26	1	0.80	53	0.36	36	---	---	3.95	474
	45° O/S	24.2	2320	26	1	0.80	53	0.36	36	---	---	3.95	474
	60° O/S	32.3	3090	26	1	0.80	53	0.36	36	---	---	4.10	492
	90° O/S	48.4	4640	26	2	1.60	107	0.72	71	---	---	7.90	948

Case Model	Wedge Model	Volume (ft³)	2,3BTUH	Suction Temp. (°F)	Fans per Case	Standard Fans		High Efficiency Fans		Anti-Condensate Heaters		Maximum Lighting	
						120 Volts		120 Volts		120 Volts		120 Volts	
						Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
OPHP	30° I/S	18.3	1860	26	1	0.80	53	0.36	36	0.04 ⁴	5	4.75	570
	45° I/S	27.5	2790	26	1	0.80	53	0.36	36	0.10 ⁴	12	4.75	570
	60° I/S	36.7	3720	26	1	0.80	53	0.36	36	0.34 ⁴	41	4.75	570
	90° I/S	55.0	5580	26	2	1.60	107	0.72	71	0.32 ⁴	38	9.50	1140
	30° O/S	15.8	1610	26	1	0.80	53	0.36	36	0.10 ⁴	12	4.75	570
	45° O/S	23.7	2410	26	1	0.80	53	0.36	36	0.14 ⁴	17	4.75	570
	60° O/S	31.6	3210	26	1	0.80	53	0.36	36	0.18 ⁴	22	4.75	570
	90° O/S	47.4	4810	26	2	1.60	107	0.72	71	0.28 ⁴	34	9.50	1140

¹ BTUHs listed are for parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.11.

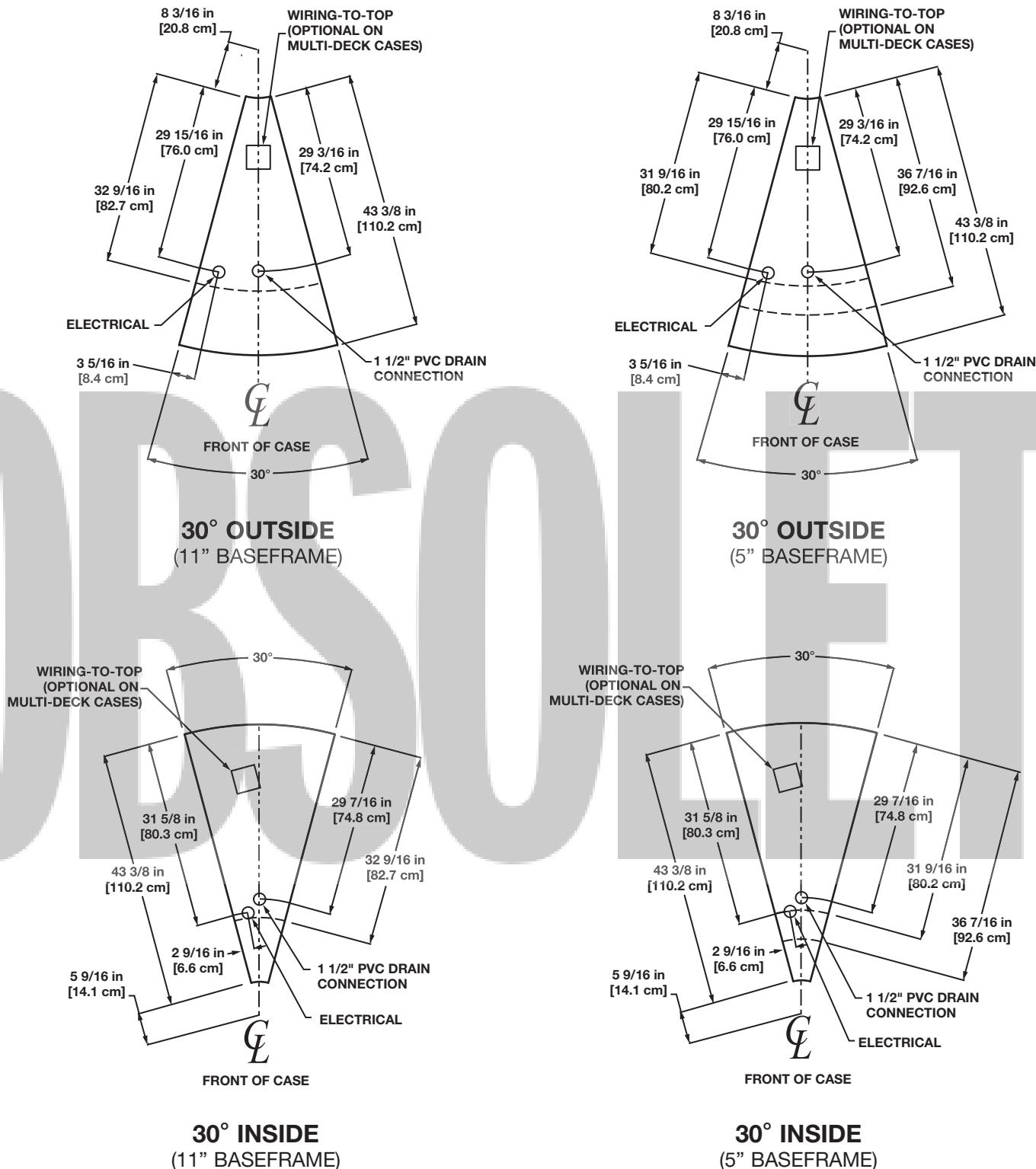
² BTUHs listed are for parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.08.

³ Listed case BTUH indicates lighted shelves/cornice.

⁴ Anti-condensate heater data for unlighted rear sill. For lighted rear sill, double the values.

30° Curved Case

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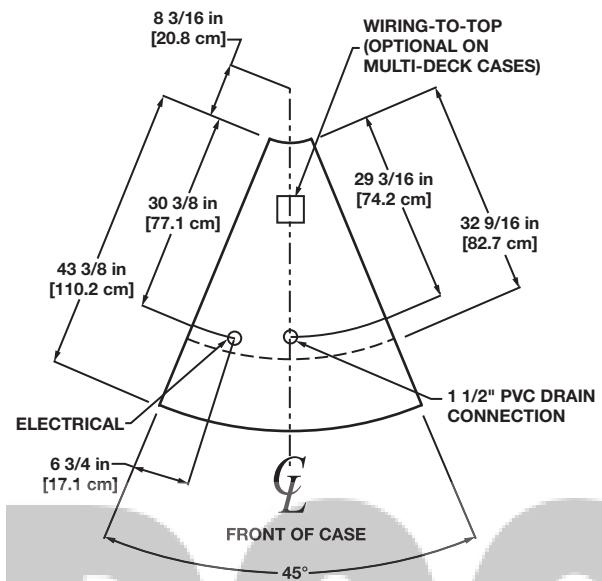


NOTE: Curved case cross-sections are the same as the standard model.

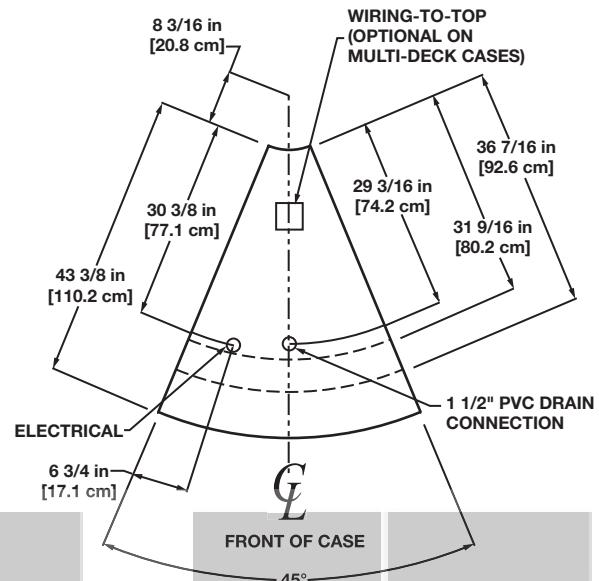
45° Curved Case

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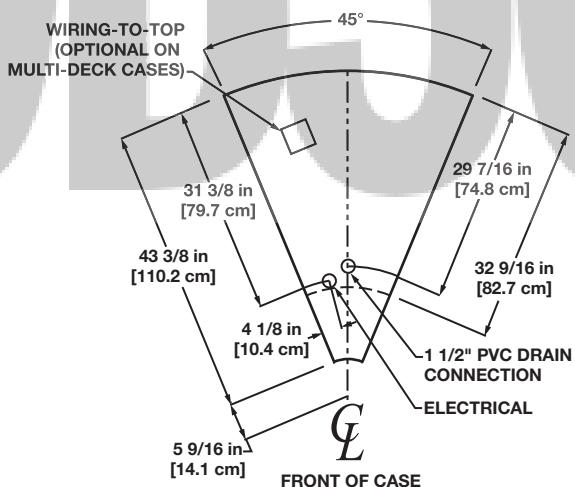
CURVED CASES



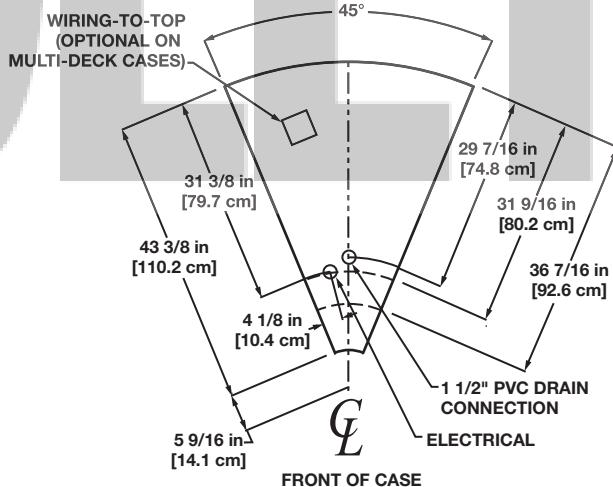
45° OUTSIDE
(11" BASEFRAME)



45° OUTSIDE
(5" BASEFRAME)



45° INSIDE
(11" BASEFRAME)



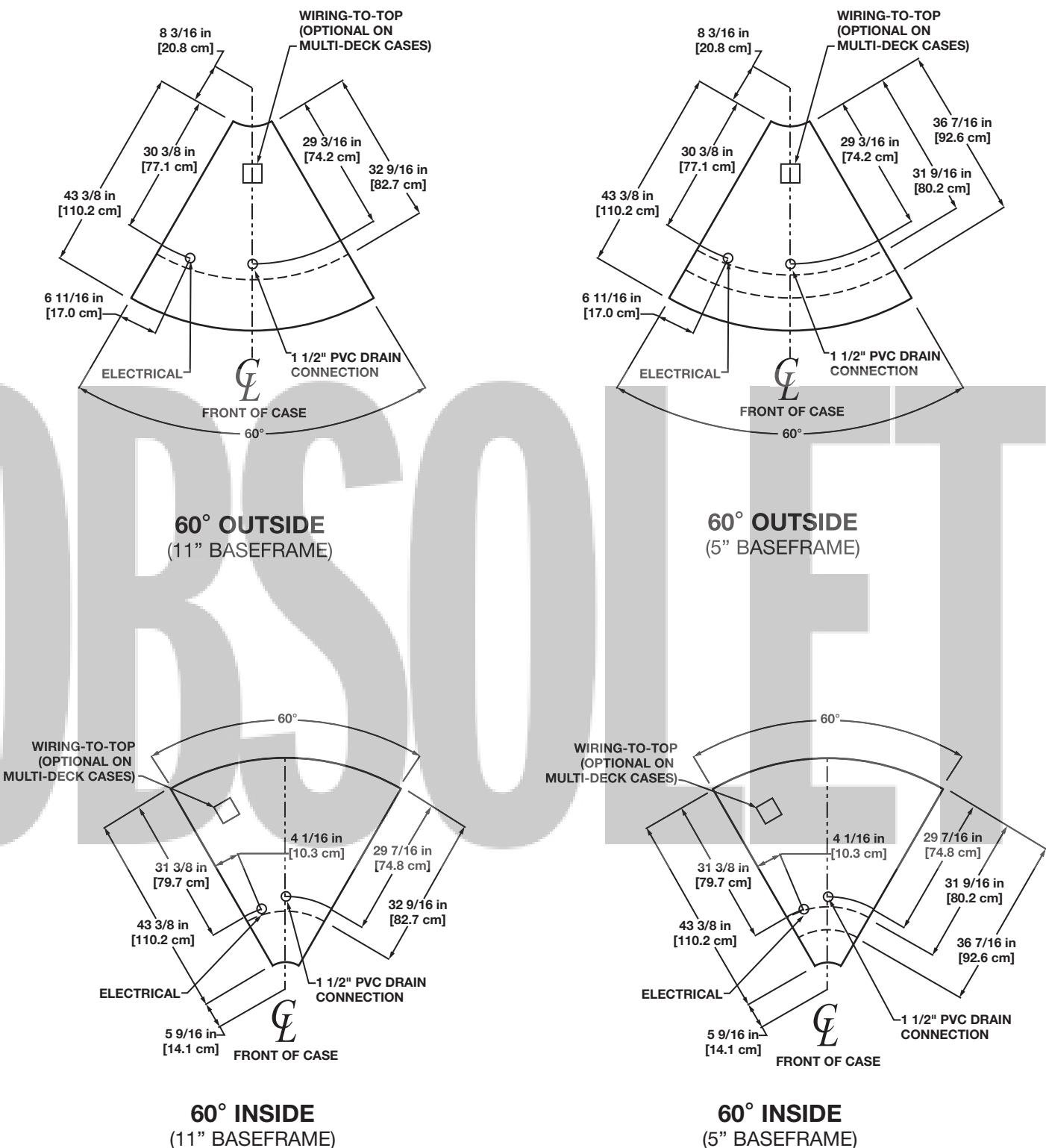
45° INSIDE
(5" BASEFRAME)

NOTE: Curved case cross-sections are the same as the standard model.



60° Curved Case

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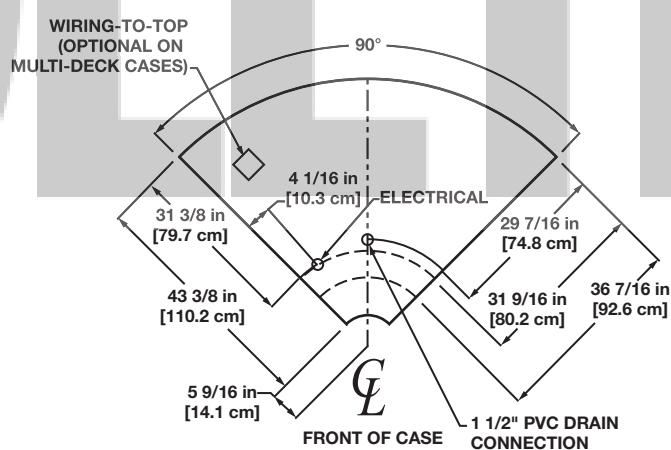
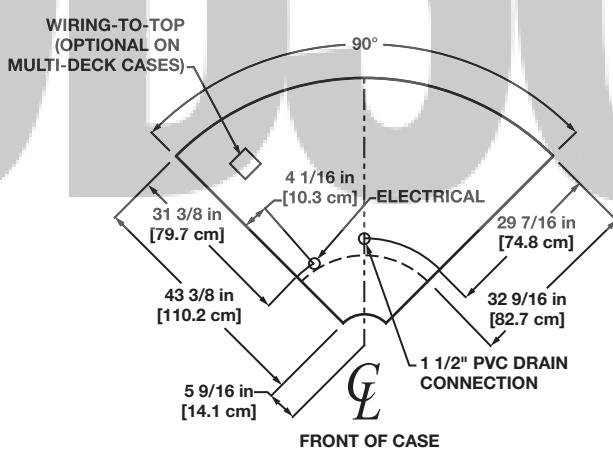
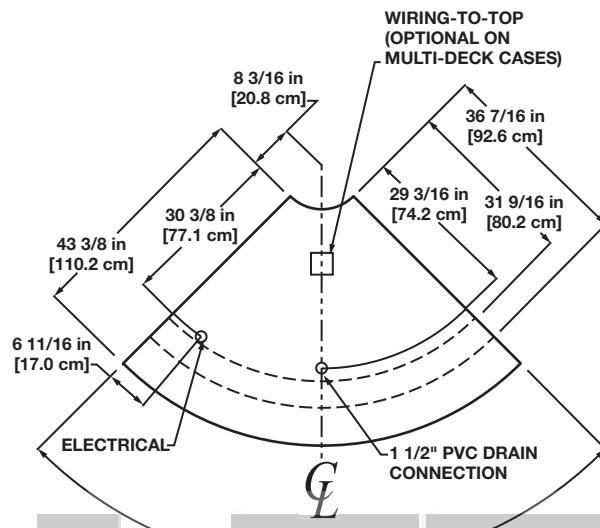
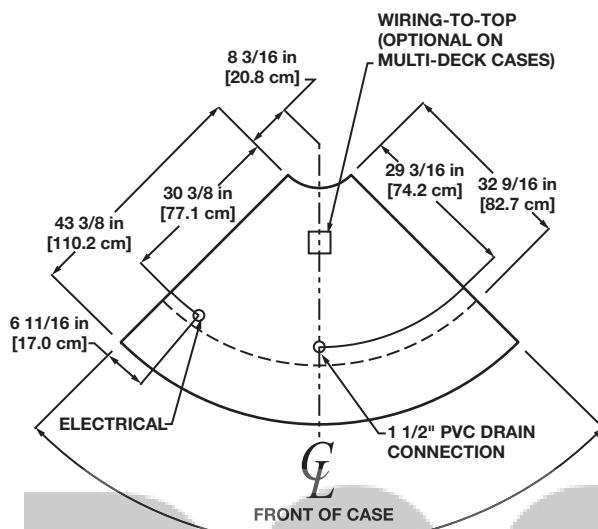


NOTE: Curved case cross-sections are the same as the standard model.

90° Curved Case

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CURVED CASES



90° OUTSIDE
(11" BASEFRAME)

90° INSIDE
(5" BASEFRAME)

NOTE: Curved case cross-sections are the same as the standard model.

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