UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DUKE MANUFACTURING CO.
Petitioner

v.

MARMON FOODSERVICE TECHNOLOGIES, INC.
Patent Owner

Case: IPR2026-00482
Patent No. 11,771,264

PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO. 11,771,264

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37 C.F.R. §42.15 359

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EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 11,771,264 ("the '264 Patent")
1002	Prosecution History of the '264 Patent
1003	Declaration of Glenn Vallee
1004	*Curriculum Vitae* of Glenn Vallee
1005	Infrared Heatsink Holding Unit Operators Manual ("IRHS Manual")
1006	Infra Red Heat Sink Specifications ("IRHS Specifications")
1007	bk.dukemfg.com ("Duke Website")
1008	Infrared Heatsink Holding Unit Service Manual ("IRHS Service Manual")
1009	Prince Castle Holding Bins ("Prince Castle")
1010	U.S. Patent Publication No. 2010/0288748 ("Fortmann'748")
1011	U.S. Patent Publication No. 2016/0073821 ("Shei'821")
1012	U.S. Patent Publication No. 2007/0108178 ("Jones")
1013	U.S. Patent Publication No. 2009/0126580 ("Hartfelder")
1014	U.S. Patent No. 10,258,197 ("Fortmann'197")
1015	U.S. Patent Publication No. 2008/0302778
1016	U.S. Patent Publication No. 2004/0069155 ("Shei'155")
1017	U.S. Patent No. 6,175,099 ("Shei'099")
1018	U.S. Patent No. 5,852,967

Exhibit No.	Description
1019	U.S. Patent No. 6,658,994 (“McMillan”)
1020	U.S. Patent Publication No. 2011/0114618
1021	U.S. Patent Publication No. 2011/0114624
1022	U.S. Patent Publication No. 2011/0252813 (“Veltrop”)
1023	U.S. Provisional Patent Application No. 62/193,992 (“the ’992 Provisional”)
1024	U.S. Patent No. 6,119,587
1025	U.S. Patent No. 3,461,275 (“Poole”)
1026	U.S. Patent No. 7,258,064 (“Vaseloff”)
1027	U.S. Patent Publication No. 2014/0130684 (“Reese”)
1028	Merco Holding Cabinets (“Merco”)
1029	U.S. Patent No. 6,011,243
1030	Declaration of Kathryn Veder
1031	E-mail Collection (Trade Show Related)
1032	E-mail Collection (IRHS Manual Related)
1033	E-mail Collection (IRHS Specifications Related)
1034	E-mail Collection (IRHS Service Manual Related)
1035	Flame Magazine
1036	Declaration of Natasha Zerbey
1037	Declaration of Arthur Lemley

Exhibit No.	Description
1038	Declaration of Sheldon Coach
1039	IRHS Sales Spreadsheet
1040	Proposed Protective Order - Clean
1041	Proposed Protective Order - Marked-Up
1042	U.S. Patent Publication No. 2014/0010937 ("Stanger")
1043	PCT Publication No. WO 2015/031500 ("Loy")
1044	E-mail (EMEA Approved Equipment List (AEL) + Policy – 12/2013)
1045	E-mail (PHU Specifications DRAFT)
1046	E-mail (IRHS specification questions)
1047	U.S. Patent No. 6,607,766
1048	U.S. Patent No. 5,590,586
1049	E-mail (Trip Report – BK April 24-26)
1050	Declaration of Greg Hake

Emphasis added throughout unless indicated otherwise.

Figures annotated throughout unless indicated otherwise.

I. INTRODUCTION

U.S. Patent 11,771,264 (the ’264 Patent) involves food-holding bins. EX1001: Abstract, 1:66-67; EX1003: ¶¶31-32.

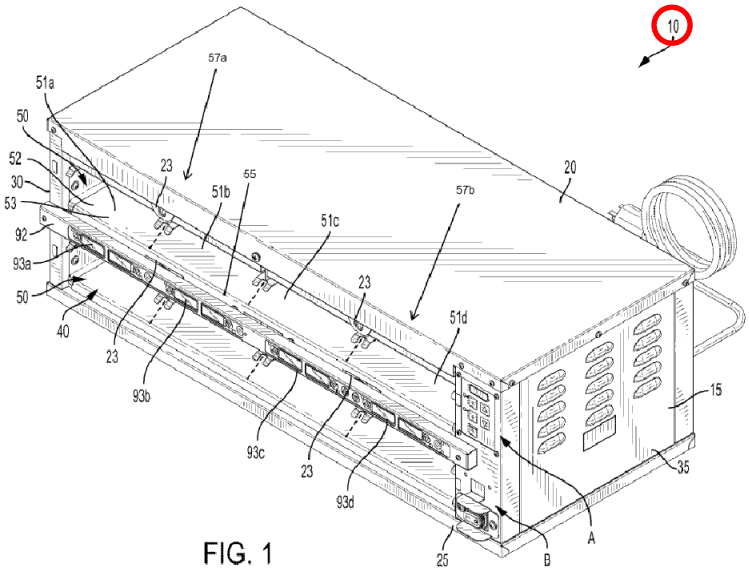


FIG. 1

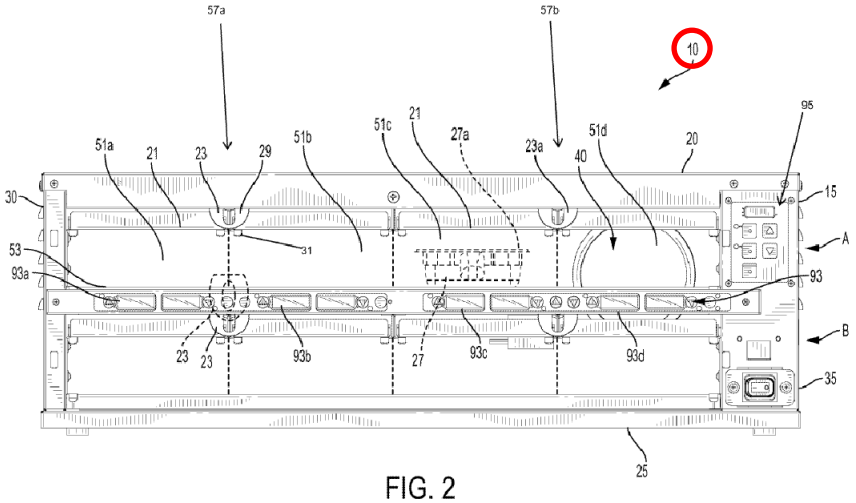


FIG. 2

EX1001.

The ’264 Patent combines well-known methods/features (2x4/3x4 bay configurations, zoned heating, control locations, lids, lid shelves, and lid latches). EX1003: ¶¶33-35.

Duke Manufacturing Co. ("Duke") respectfully requests *inter partes* review of claims 1-20. Two sets of grounds are presented: one based on related non-patent literature and one demonstrating the '264 Patent cobbles together well-known methods/features.

II. IDENTIFICATION OF CHALLENGE

A. Identification of Prior Art

The '264 Patent's priority is April 20, 2016.

Prior art under §102(a)(1):

- Fortmann'748
- Jones
- Hartfelder
- Veltrop
- Shei'821
- Shei'155
- McMillan
- Shei'099
- Vaseloff
- Reese
- Stanger
- Loy
- IRHS Manual
- IRHS Specifications
- Duke Website
- IRHS Service Manual
- Prince Castle

- Merco

The IRHS Manual, IRHS Specifications, Duke Website, and IRHS Service Manual ("IRHS Documents") are printed publications publicly accessible to the interested public before April 20, 2016. *GoPro, Inc. v. Contour IP Holding LLC*, 908 F.3d 690, 693-95 (Fed. Cir. 2018) (interested public). IRHS products were commercially successful, driving attention to associated printed publications. EX1030: ¶¶19-36; EX1031. IRHS Manual was publicly disseminated (with 360+ IRHS deliveries). EX1030: ¶¶33, 37-39; EX1032; EX1036; EX1037; EX1038; EX1039; *Weber, Inc. v. Provisur Technologies, Inc.*, 92 F.4th 1059, 1067-69 (Fed. Cir. 2024) (operating manuals publicly accessible). IRHS Specifications was publicly disseminated (trade shows, emailed to 20+ organizations (customers, manufacturer's representatives)). EX1030: ¶¶40-44; EX1033. Duke Website was publicly accessible and advertised (industry publications, tradeshow). EX1030: ¶¶27-29; EX1007: 1-2; EX1035: 5; EX1003: ¶62; *Roku v. Universal Electronics*, No. 2024-1188, 2025 WL 1692663, *1-*3 (Fed. Cir. 2025). IRHS Service Manual was available from Duke and emailed to 6+ organizations (contractors, Whataburger, Burger King franchisee). EX1030: ¶¶34, 45-48; EX1034.



For the past 12 years, Duke has a proven record in approximately 80% of all BURGER KING® restaurants worldwide. Now we introduce our best effort yet – our new **InfraRed HeatSink™** holding unit, designed to provide you with hot quality food **all day long.** The IRHS gives restaurant owners the flexibility to hold prepared food items at the ideal flavor, texture, and temperature, ready and waiting to serve customers quickly. Experience the Duke difference...

DUKE INFRARED HEATSINK™ (IRHS):

Duke heavyweight construction, **built to last**
Dual heat technology: Top - **sealed solid state InfraRed**; Bottom - **HeatSink™**
No hot air and **no moving parts, no fans**
Fully sealed, **easily cleaned** top compartments
Unlimited IR settings for **complete product recipe flexibility**
Fully independent pans for flexible product location
Smooth corners **easy to clean**
Robust Duke timer bar **for long life**; full **Kitchen Minder® compatibility available**
Thick, durable HeatSink™ **aluminum pan cover** for broiled products
Power management & idle mode for **energy conservation**

EX1035: 5.

Prince Castle and Merco are archived publicly accessible websites (including Patent Owner's) predating April 20, 2016. EX1030: ¶¶15-17; EX1009: 1-2; EX1028: 1-2; EX1003: ¶¶119, 126.

Fortmann'197 is prior art via the '992 Provisional which meets the "ministerial requirements" and "'describe[d] the subject matter' relied upon." *Penumbra, Inc. v. Rapidpulse Inc.*, IPR2021-01466, Paper 34 at 32 (P.T.A.B. Mar. 10, 2023) (precedential). Fortmann'197 claimed benefit of, was co-pending with, and shared common inventors with the '992 Provisional. EX1014: (22), (72), 1:6-8; EX1023: 1. The '992 Provisional describes the relevant subject matter in Fortmann'197, the two being essentially identical (compare EX1014: 1:13-10:9, Figs. 1-10 with EX1023: ¶¶[0001]-[0055] and Figs. 1-10); EX1003: ¶¶974-978.

The references and '264 Patent involve food holding and heating and are thus in the same field of endeavor. EX1001: 1:66-2:36; EX1005: 1; EX1006: 1; EX1007: 8, 21-22, 26; EX1008: 1; EX1009: 7, 19, 36; EX1010: ¶[0002]; EX1012: ¶[0003]; EX1013: ¶[0002]; EX1014: 1:13-21; EX1016: ¶[0002]; EX1017: 1:13-15; EX1018: 1:5-7; EX1019: 1:9-14; EX1022: ¶[0010]; EX1026: 1:5-7; EX1027: ¶[0001]; EX1028: 8, 14, 21; EX1042: ¶[0003]; EX1043: ¶[0001]; EX1003: ¶¶37-133.

B. Statutory Grounds for Challenge

All grounds apply §103.

Ground	References	Claims Challenged
1	IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual	1-6, 8-12, 16-20
2	Ground 1 + Hartfelder, Shei'099	10, 13-15
3	Ground 1 + Shei'821	5-6
4	Ground 1 + Shei'821, McMillan, Veltrop, Hartfelder	7
5	Ground 1 + Prince Castle, Reese	18
6	Ground 1 + Merco	19
7	Ground 1 + Prince Castle, Reese, Merco, Jones	16-20
8	Ground 1 + Hartfelder, Shei'099, Shei'821, McMillan, Veltrop, Prince Castle, Reese, Merco, Jones, Shei'155	1-20
9	Ground 1 + Hartfelder, Shei'099, Shei'821, McMillan, Veltrop, Prince Castle, Reese, Merco, Jones, Shei'155	1-20
10	Fortmann'748, IRHS Manual, IRHS Specifications, Duke Website, IRHS Service Manual, Jones, Fortmann'197, McMillan, Vaseloff, Hartfelder, Shei'099, Stanger, Loy, Veltrop	1-10, 12-17, 20
11	Ground 10 + Prince Castle	18
12	Ground 10 + Merco	11, 19

C. POSA

The person having ordinary skill in the art ("POSA") would have an engineering degree and/or 4 years' experience designing and/or manufacturing food-service equipment. POSA would be familiar with food service equipment in 2016—including holding cabinets—and would know how to modify such equipment per design criteria. EX1003: ¶¶1-30.

III. CLAIM CONSTRUCTION

Plain and ordinary meaning applied throughout.

IV. GROUND 1: Claims 1-6, 8-12, and 16-20 Are Obvious Over the IRHS Documents

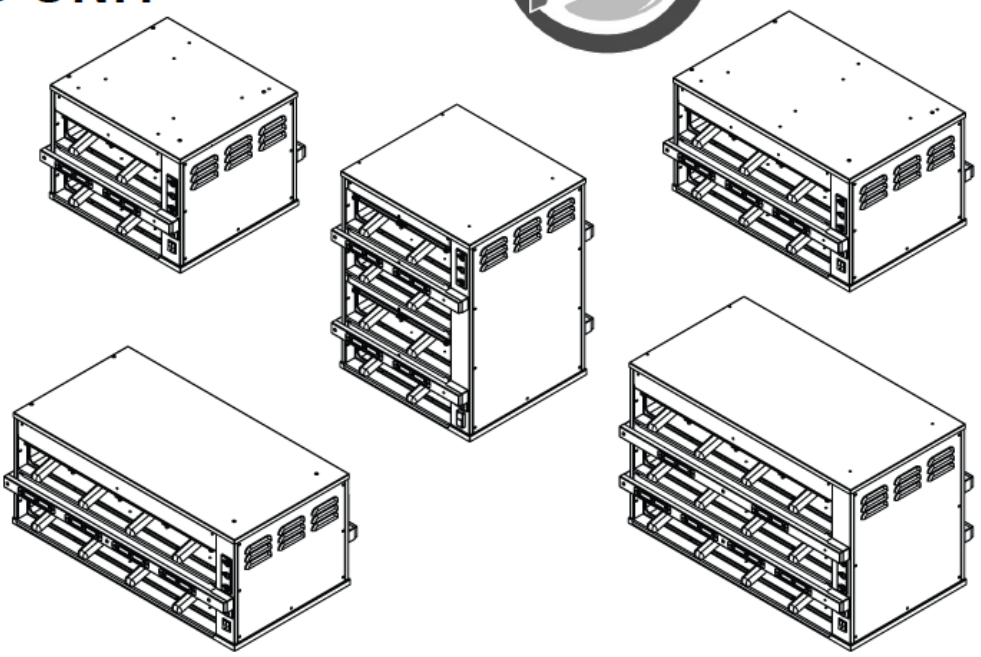
A. Combination of IRHS Documents

POSA understands the IRHS Documents all describe the same Duke Infrared Heatsink Holding Units ("IRHS") as they use similar images, specifications, descriptions (name ("InfraRed HeatSink") and model numbers), and Duke's trademarks. EX1005: 1, 6-10; EX1006: 1-2; EX1007: 26, 54-57; EX1008: 1, 5-9; EX1003: ¶¶134-139.

OPERATORS MANUAL

Your Solutions Partner

INFRARED HEATSINK ™ HOLDING UNIT



MODELS

IRHS22
IRHS23
IRHS24
IRHS34
IRHS42

IMPORTANT INFORMATION, READ BEFORE USE.
PLEASE SAVE THESE INSTRUCTIONS.

This manual is Copyright © 2014 Duke Manufacturing Company. All rights reserved. Reproduction without written permission is prohibited. Duke is a registered trademark of the Duke Manufacturing Company.

Duke Manufacturing Company

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St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074
www.dukemfg.com

P/N 229945D
02/18/14

EX1005: 1.

Your Solutions Partner

Specifications

F.O.B Sedalia, Missouri 65302



IRHS - 23

OPTIONS:

- ☐ Metal trivet for fried/dry product
- ☐ Kitchen Minder master unit
- ☐ Kitchen Minder slave unit
- ☐ Single side control

AGENCY LISTING:

DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 63102

800.735.3853 Toll Free
314.231.5074 Fax
www.dukemfg.com

Approval Stamp(s):

PRODUCT HOLDING UNIT - IRHS

PRODUCT INFORMATION:

PROJECT: _____
ITEM: _____
QUANTITY: _____

MODEL:

Product Holding Unit - Infra Red Heat Sink

IRHS-22	2 down, 2 across
IRHS-23	2 down, 3 across
IRHS-24	2 down, 4 across
IRHS-34	3 down, 4 across

BODY:

- Stainless steel exterior
- Annodized aluminum HeatSink™ with fully radiused curved corners that are easily cleaned
- Only removable part for cleaining is aluminum cover for broiled product
- Modular and scaleable design

HEATING:

- Dual technology heating to reduce temperature variance from top to bottom
- Individually controlled IR emitters pulse on and off for controlling optimum amount of energy being applied to the food
- Zoned bottom heat to provide additional holding environment customization
- IR Turbo Boost for instant shot of IR energy

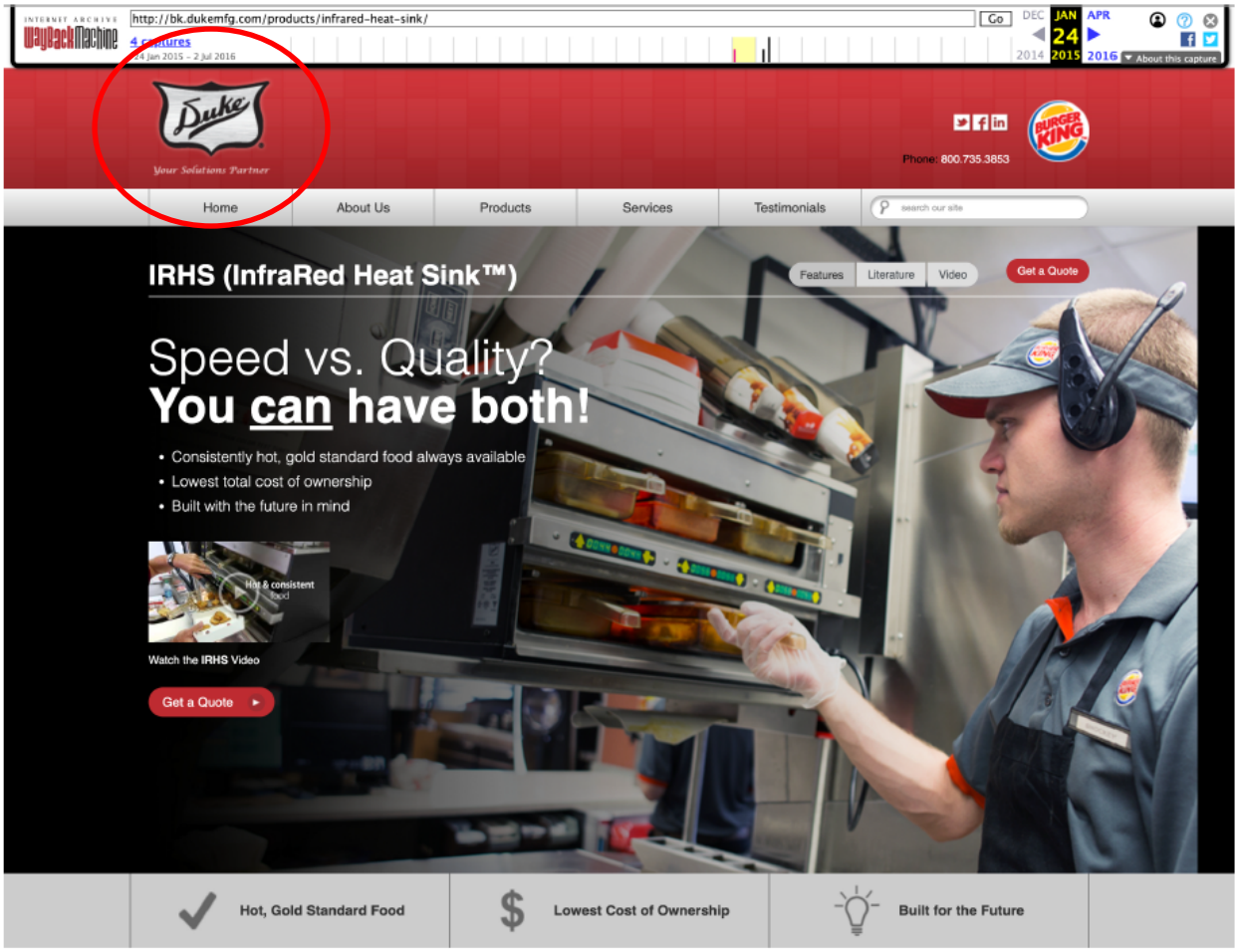
CONTROLS

- Automatic pan linking to ensure FIFO
- Custom heat settings for food product
- Each compartment individually controlled
- Alphanumeric displays to indicate product description, temp and hold time remaining
- Web based programming via USB
- Day part switch for global recipe changes (B, L, D)
- Firmwave updates via USB

SHORT FORM SPECIFICATIONS:

Duke Product Holding Units - Upper IR emitters provide optimum environment for holding of all fried foods resulting in extended hold time, moist protein and crispy breading. Bottom zoned heat element provides gentle heat to minimize temperature distribution from top to bottom of pan. Alphanumeric control with independent well flexibility. Programmable via website & USB with daypart switch to facilitate global recipe changes.

EX1006: 1.


http://bk.dukemfg.com/products/infrared-heat-sink/
Duke
Your Solutions Partner
Phone: 800.735.3853
Home
About Us
Products
Services
Testimonials
IRHS (InfraRed Heat Sink™)
Features
Literature
Video
Get a Quote
Speed vs. Quality?
You can have both!
• Consistently hot, gold standard food always available
• Lowest total cost of ownership
• Built with the future in mind
Watch the IRHS Video
Get a Quote
Hot, Gold Standard Food
Lowest Cost of Ownership
Built for the Future

EX1007: 8.

IRHS InfaRed HeatSink® Product Holding Units

- Consistently hot, gold standard food is always available
- Lowest cost of ownership solution
- Built with the future in mind



1. Metal HeatSink cover to eliminate plastic lids. Cover only required for broiled foods.
2. No more plastic faceplates! Stainless steel faceplate protects internal components.
3. Rolled edges and completley sealed construction prevent grease seepage to internal components.
4. Ensure quick and accurate fixes with more advanced diagnostics and a more robust Duke timer bar.

By combining the technologies of InfraRed and HeatSink, we are able to hold food with superior flavor and temperature consistency. Previous generations of the Duke holding units contained only HeatSink, heating from below and wrapping around the sides of each pan. By adding the top-down InfraRed heat, we have been able to deliver a consistently hot pan of product, from top to bottom. This also allows unlimited menu flexibility as each food product has tailored settings to control the thermal path of the food, leading to optimal quality, consistency and extended hold.

Part #'s	Controls	Stand-Alone/ Master/Satellite	Electrical Requirements			
			Voltage	Hz	Amps	NEMA
IRHS24-XXX4T1R	Single	Stand-Alone	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-XXX4T2R	Double	Stand-Alone	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-XXX4T1S	Single	Satellite	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-XXX4T1M	Single	Master	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-XXX4T2S	Double	Satellite	208 / 230 / 240	50/60	12	6-15P (208V/240V)
IRHS24-XXX4T2M	Double	Master	208 / 230 / 240	50/60	12	6-15P (208V/240V)

Notes
1. Replace "XXX" in the part # with the respective power supply
2. 230V Unit Electrical Requirements: IEC 60309 PIN & SLEEVE PLUG, 16 AMP

WARRANTY:
3 year parts and 1 year labor for timer bar IRHS
3 year parts and 2 year labor for VISORenabled IRHS – no timer bar unit

EX1007: 51, 56.

Duke®
Your Solutions Partner

Service Manual

INFRARED HEATSINK™ HOLDING UNIT

Includes Standalone, Kitchen Minder and VISOR models

MODELS
IRHS22
IRHS23
IRHS24
IRHS34
IRHS42



EX1008: 1.

It would have been obvious to combine IRHS Documents' teachings and there would have been a reasonable expectation of success in doing so because

IRHS Documents already describe the same IRHS products. EX1003: ¶¶140-141; *Haliburton Energy Servs., Inc. v. Dynamic 3D Geosolutions LLC*, IPR2014-01186, Paper 13 at 19-20 (P.T.A.B. Jan. 12, 2015). POSA would combine IRHS Documents' features/teachings to increase diverse food holding capacity, providing customized/improved holding environments, and meet customer demands. EX1007: 17; EX1019: 1:35-49; EX1003: ¶141.

POSA would view IRHS Documents together as describing Duke's IRHS and where one document was unclear as to a feature, would apply/supplement the teachings of the other documents—with reasonable expectation of success because the IRHS documents describe the same/related products. EX1003: ¶¶142-143.

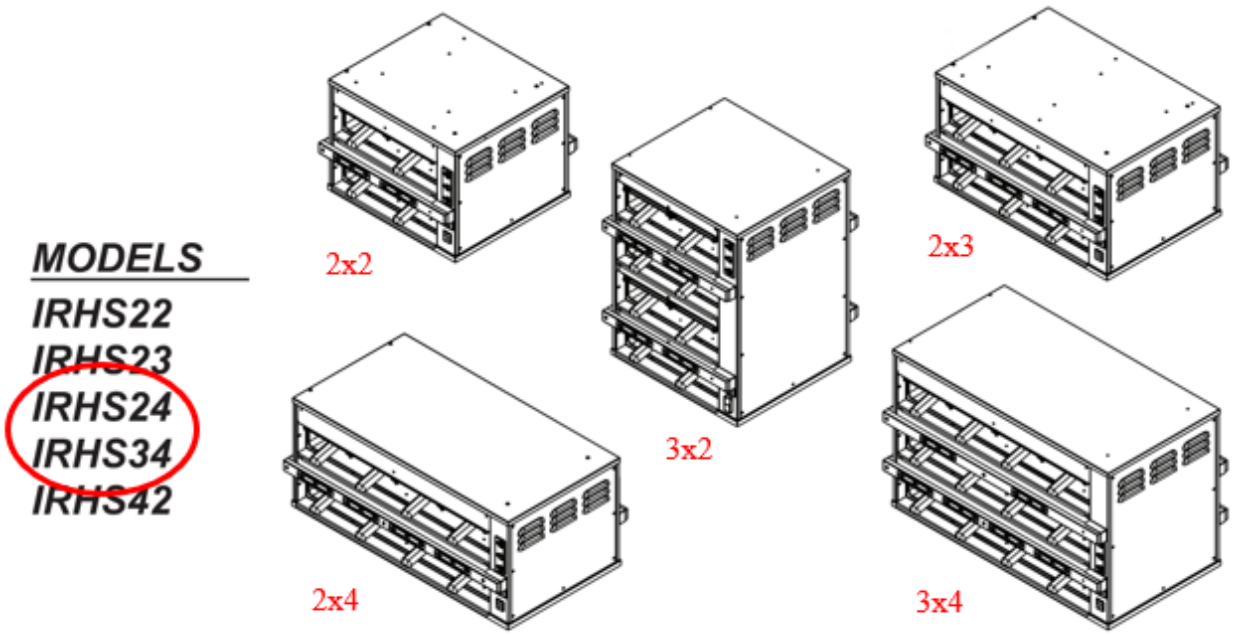
B. Independent Claim 1

1.P

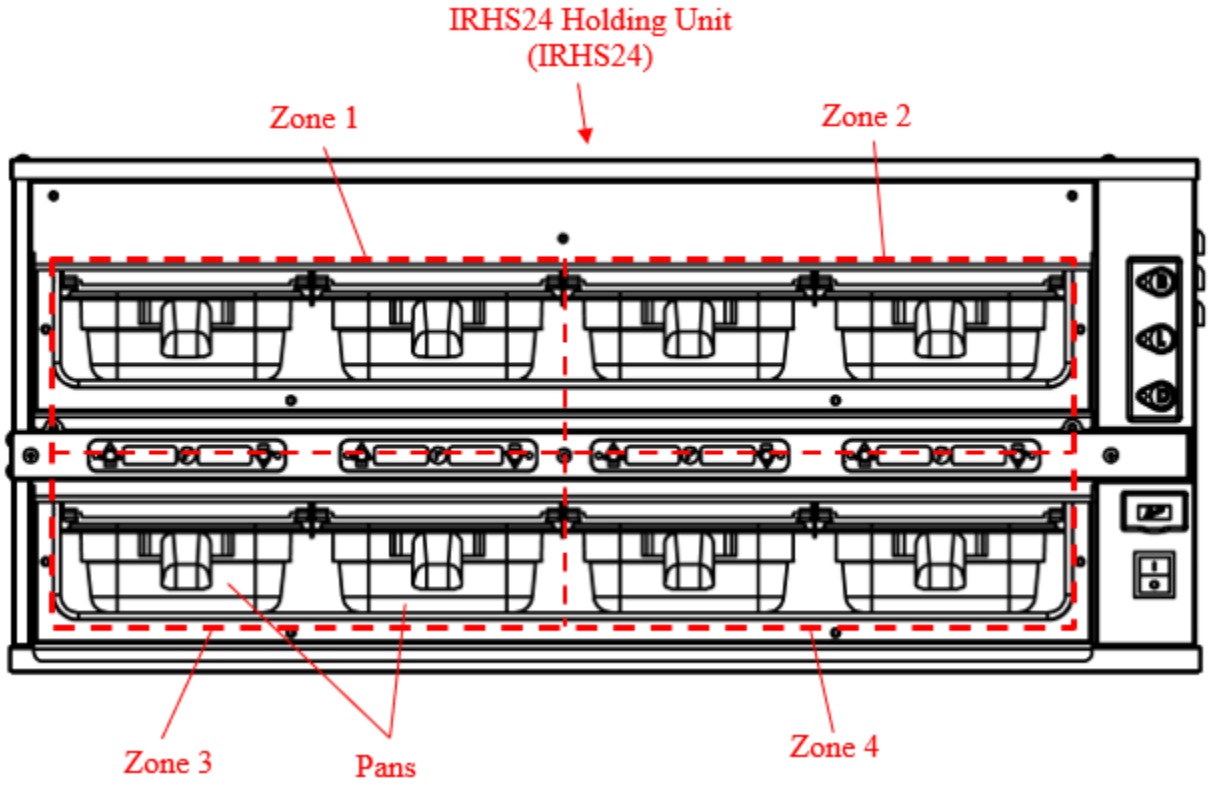
IRHS24 and IRHS34[1] are multi-zone food-holding bins for maintaining different temperatures. EX1005: 4, 6, 9; EX1006: 1; EX1007: 51, 56; EX1008: 1; Sections IV(B)(1.a.2/1.a.5), IV(B)(1.b/1.c/1.d/1.e); EX1003: ¶144.

IRHS24 (2x4 configuration) is applied for claims 1-2 and 5-20; IRHS34 (3x4 configuration) is applied for claims 1 and 3-4. EX1003: ¶145.

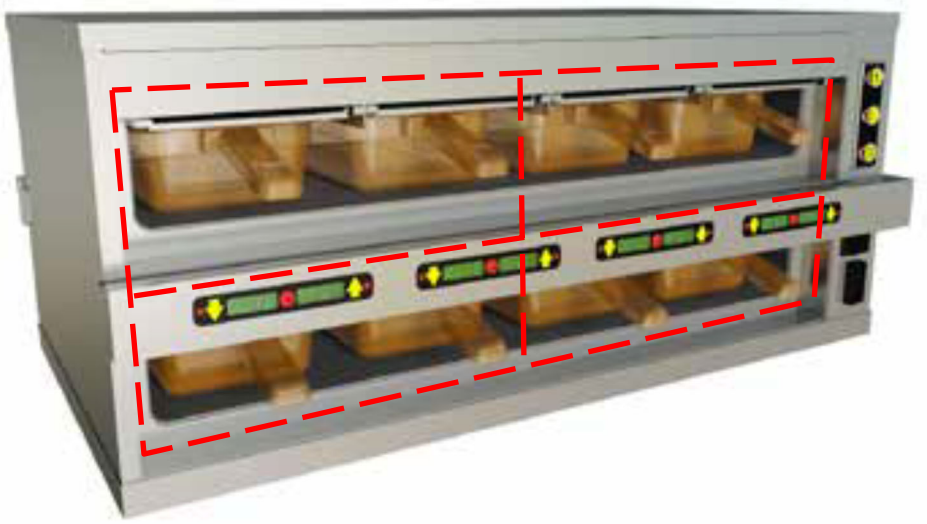
[1] "IRHS24"/"IRHS34" refers to IRHS Documents' disclosures not the commercial products.



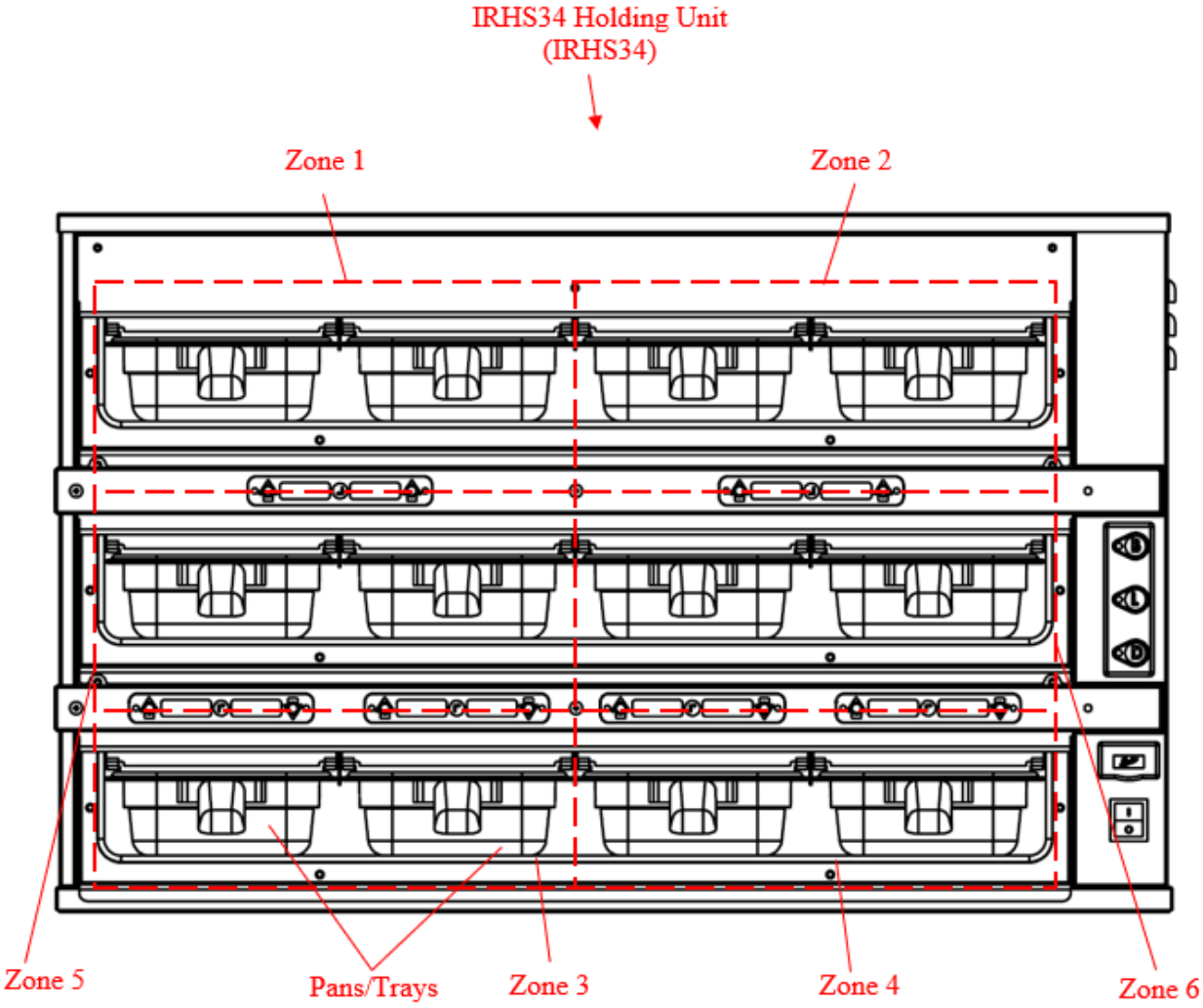
EX1005: 1.



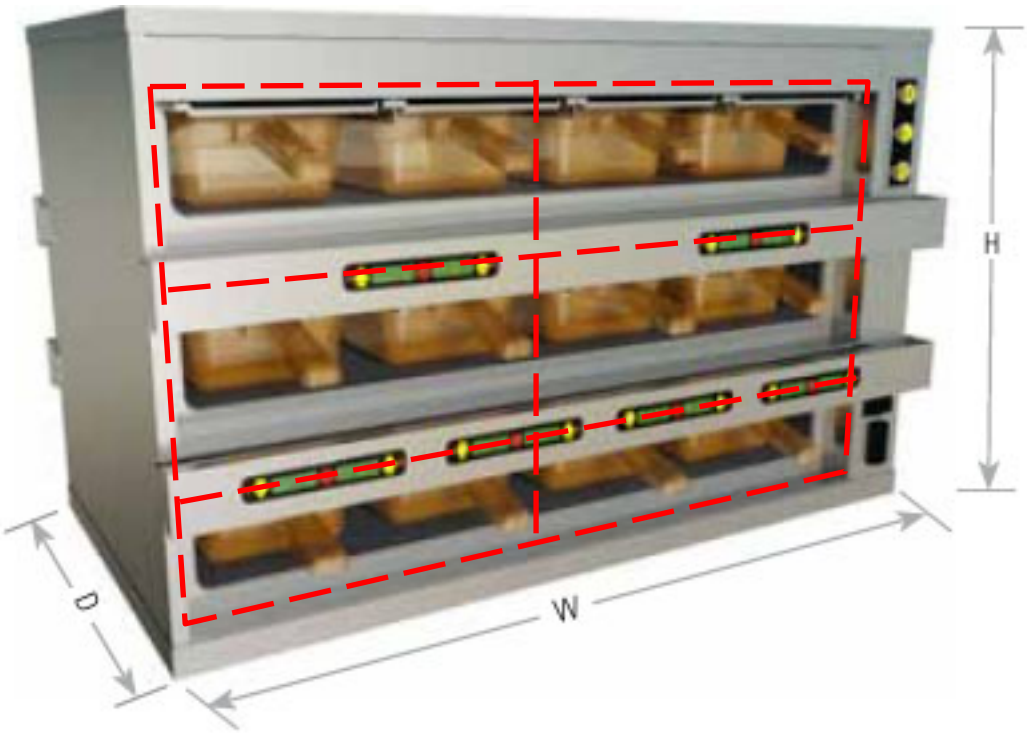
EX1005: 8.



EX1007: 56.


IRHS34 Holding Unit
(IRHS34)
Zone 1
Zone 2
Zone 5
Pans/Trays
Zone 3
Zone 4
Zone 6

EX1005: 9.

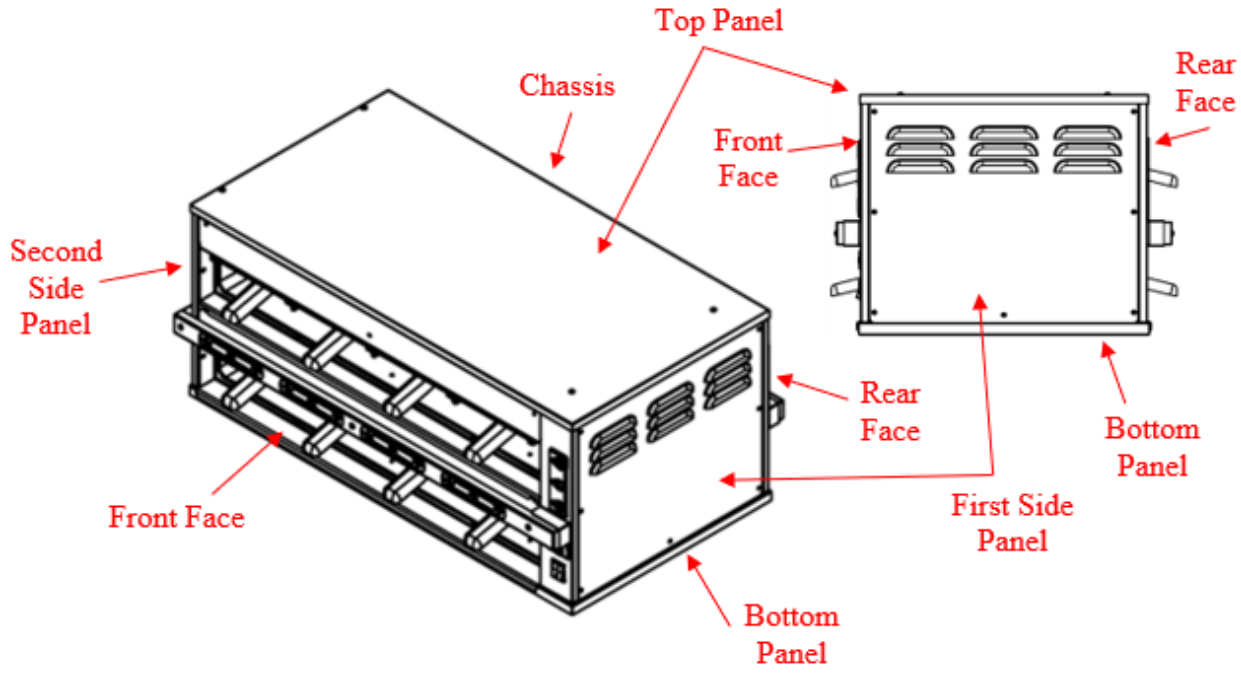


EX1007: 31.

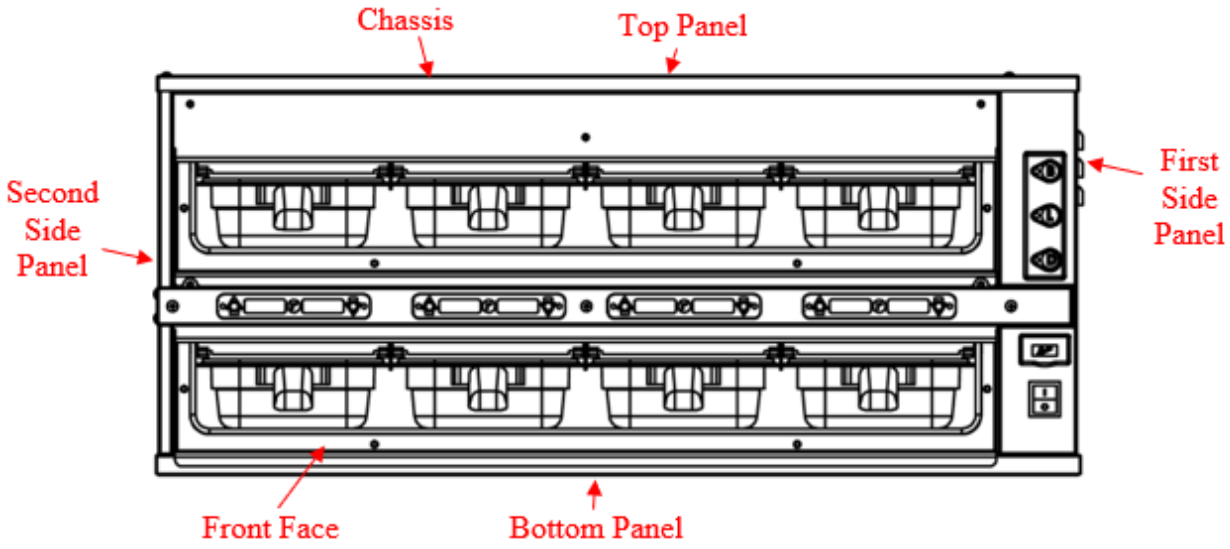
1.a.1

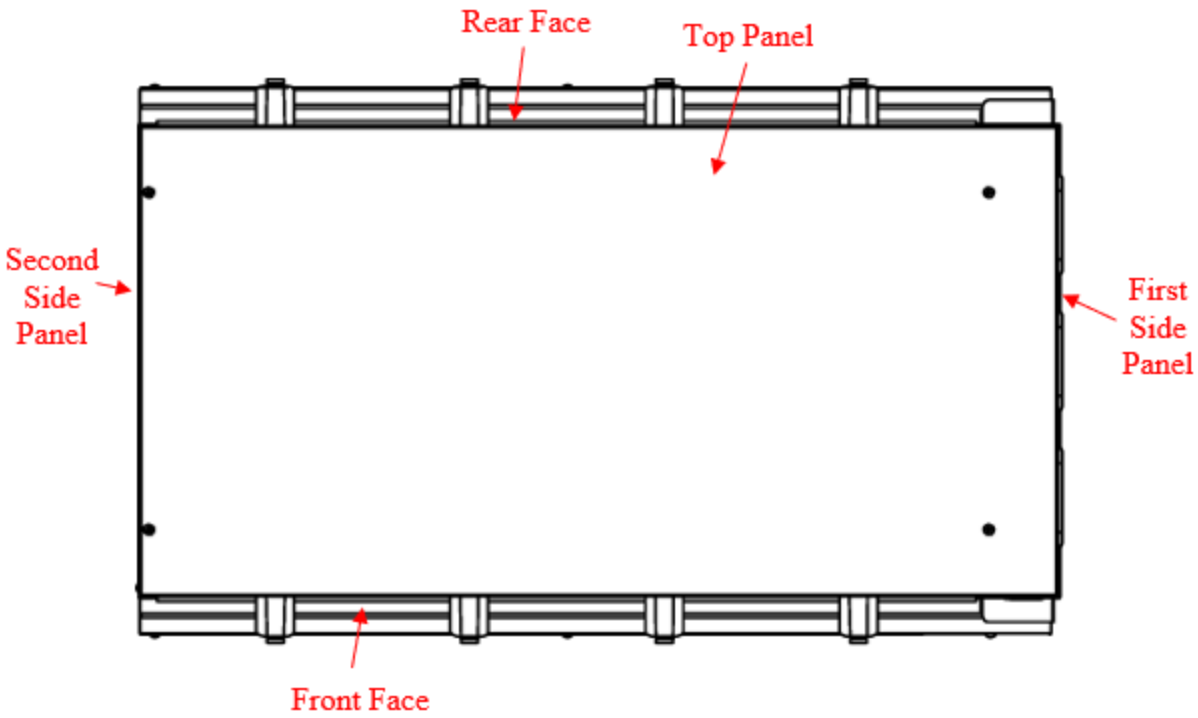
A chassis has top, first side, second side, and bottom panels, and a front face.

EX1006: 1; EX1007: 51; EX1003: ¶¶145-147.

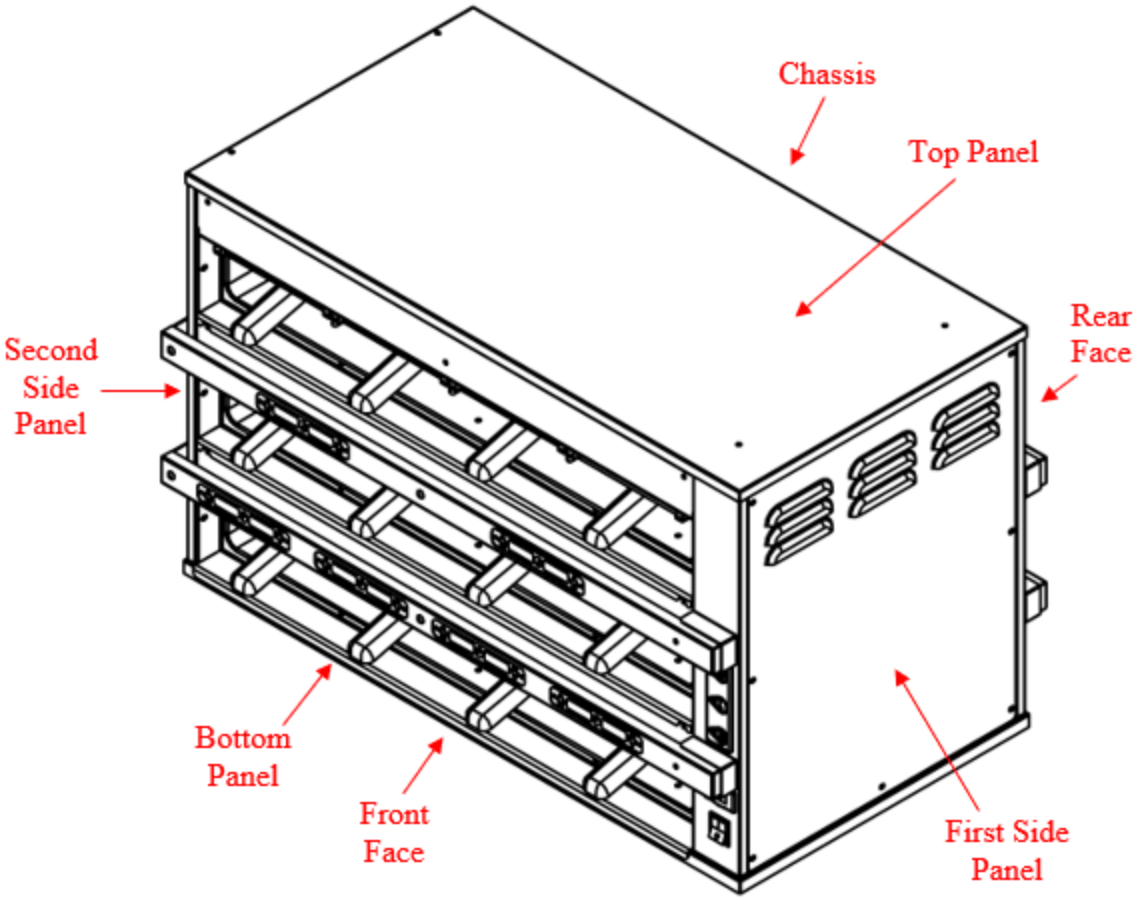

Top Panel
Chassis
Rear Face
Front Face
Second Side Panel
Rear Face
Bottom Panel
Front Face
First Side Panel
Bottom Panel

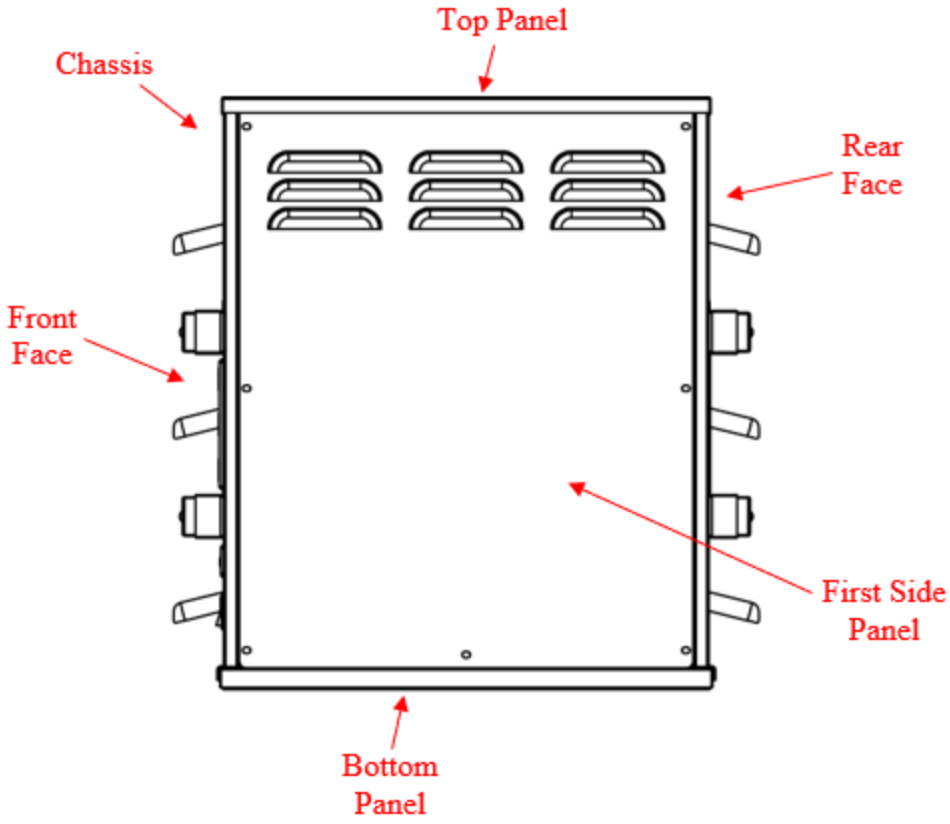
EX1005: 8.

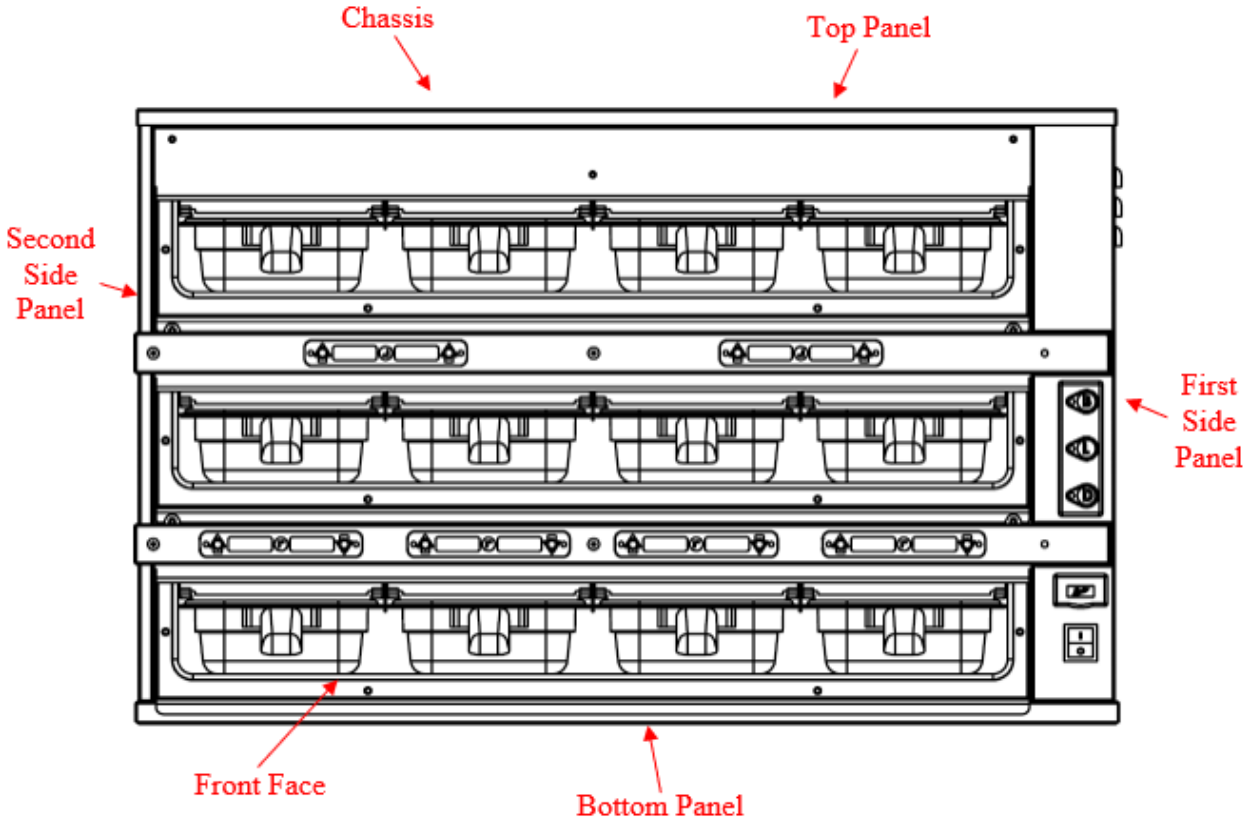

Chassis
Top Panel
Second Side Panel
First Side Panel
Front Face
Bottom Panel

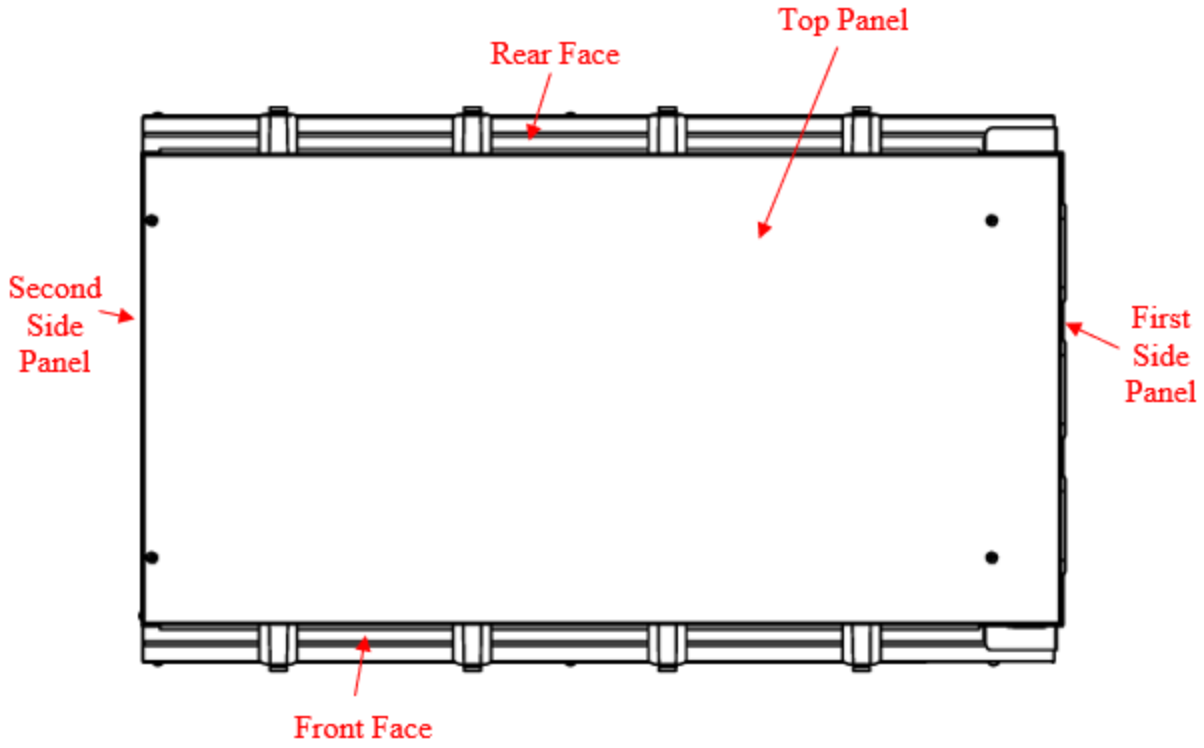

Rear Face
Top Panel
Second Side Panel
First Side Panel
Front Face

EX1005: 8.


Chassis
Top Panel
Rear Face
Second Side Panel
Bottom Panel
Front Face
First Side Panel


Top Panel
Chassis
Rear Face
Front Face
First Side Panel
Bottom Panel

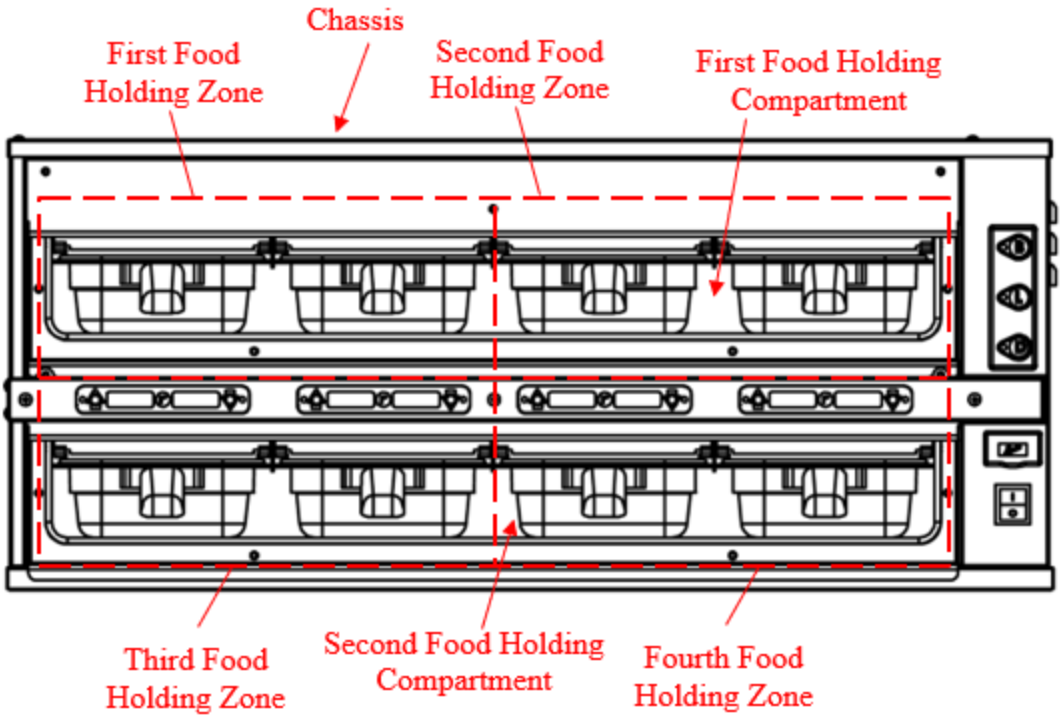

Chassis
Top Panel
Second Side Panel
First Side Panel
Front Face
Bottom Panel

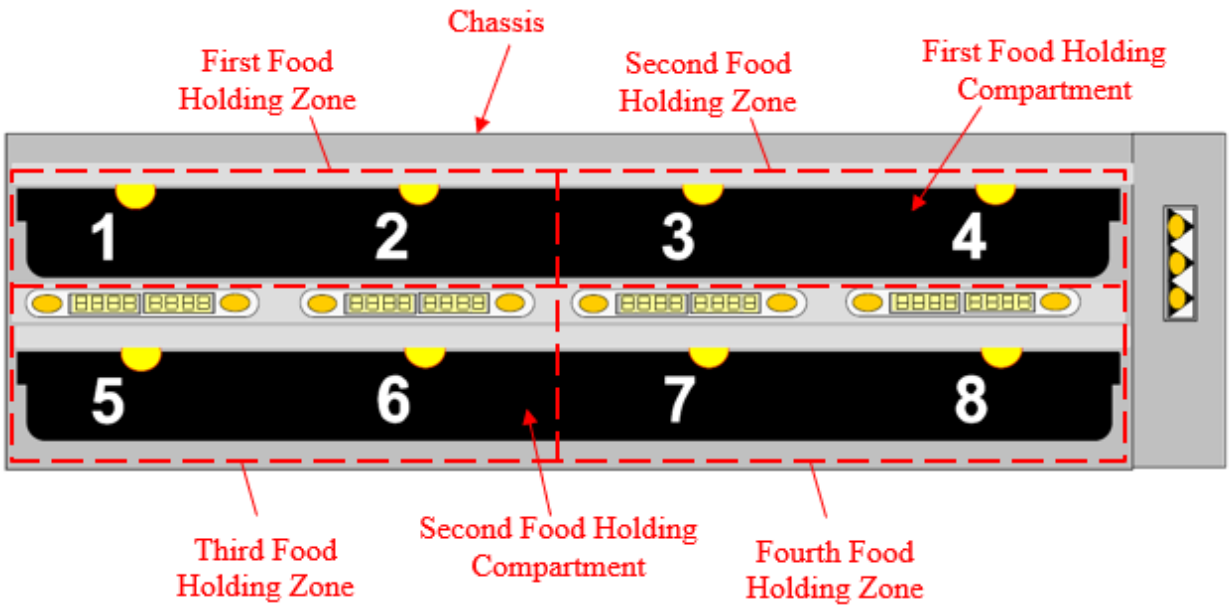


EX1005: 9.

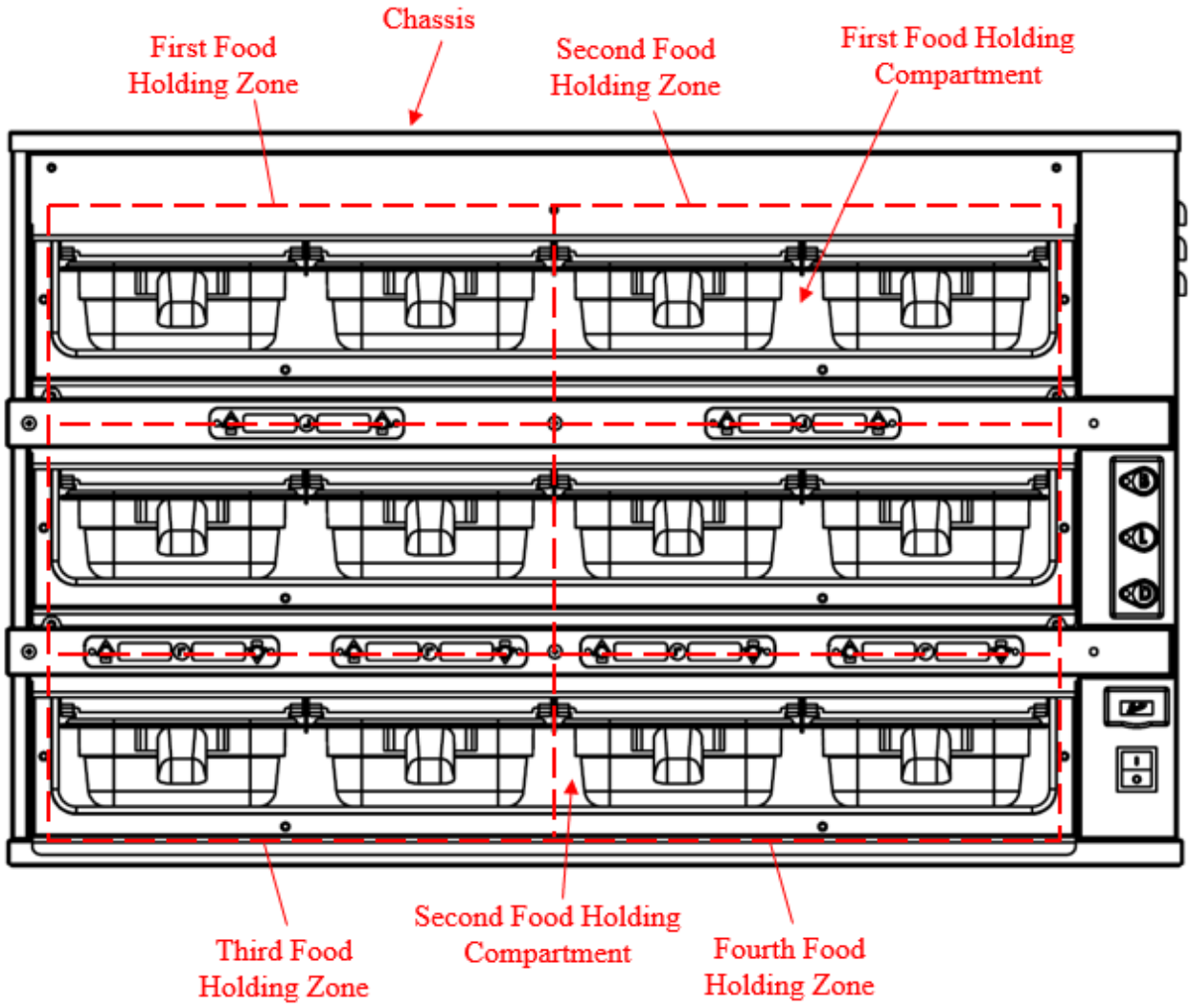
1.a.2/1.a.5

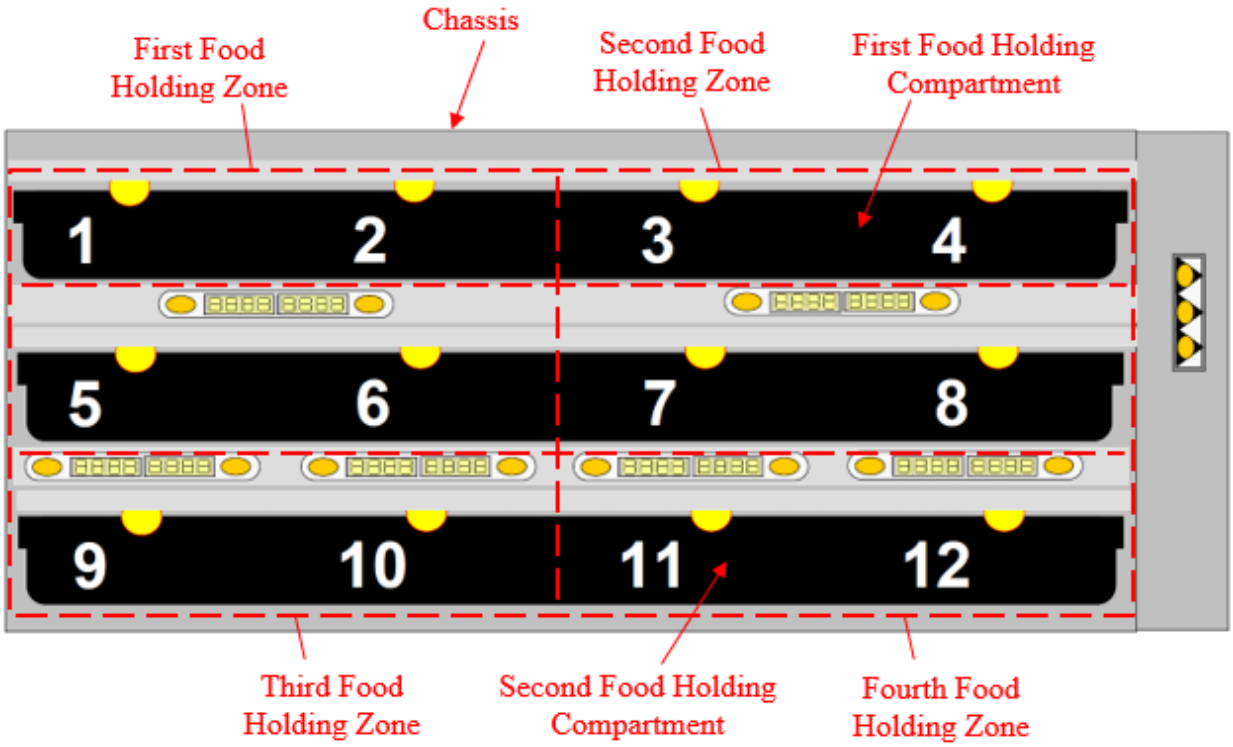
First and second food-holding compartments within the chassis include respective first and second and third and fourth food holding zones. EX1003: ¶¶148-149, 157-158.


Chassis
First Food Holding Zone
Second Food Holding Zone
First Food Holding Compartment
Third Food Holding Zone
Second Food Holding Compartment
Fourth Food Holding Zone


Chassis
First Food Holding Zone
Second Food Holding Zone
First Food Holding Compartment
1
2
3
4
5
6
7
8
Third Food Holding Zone
Second Food Holding Compartment
Fourth Food Holding Zone

EX1005: 8, 25.


Chassis
First Food Holding Zone
Second Food Holding Zone
First Food Holding Compartment
Third Food Holding Zone
Second Food Holding Compartment
Fourth Food Holding Zone

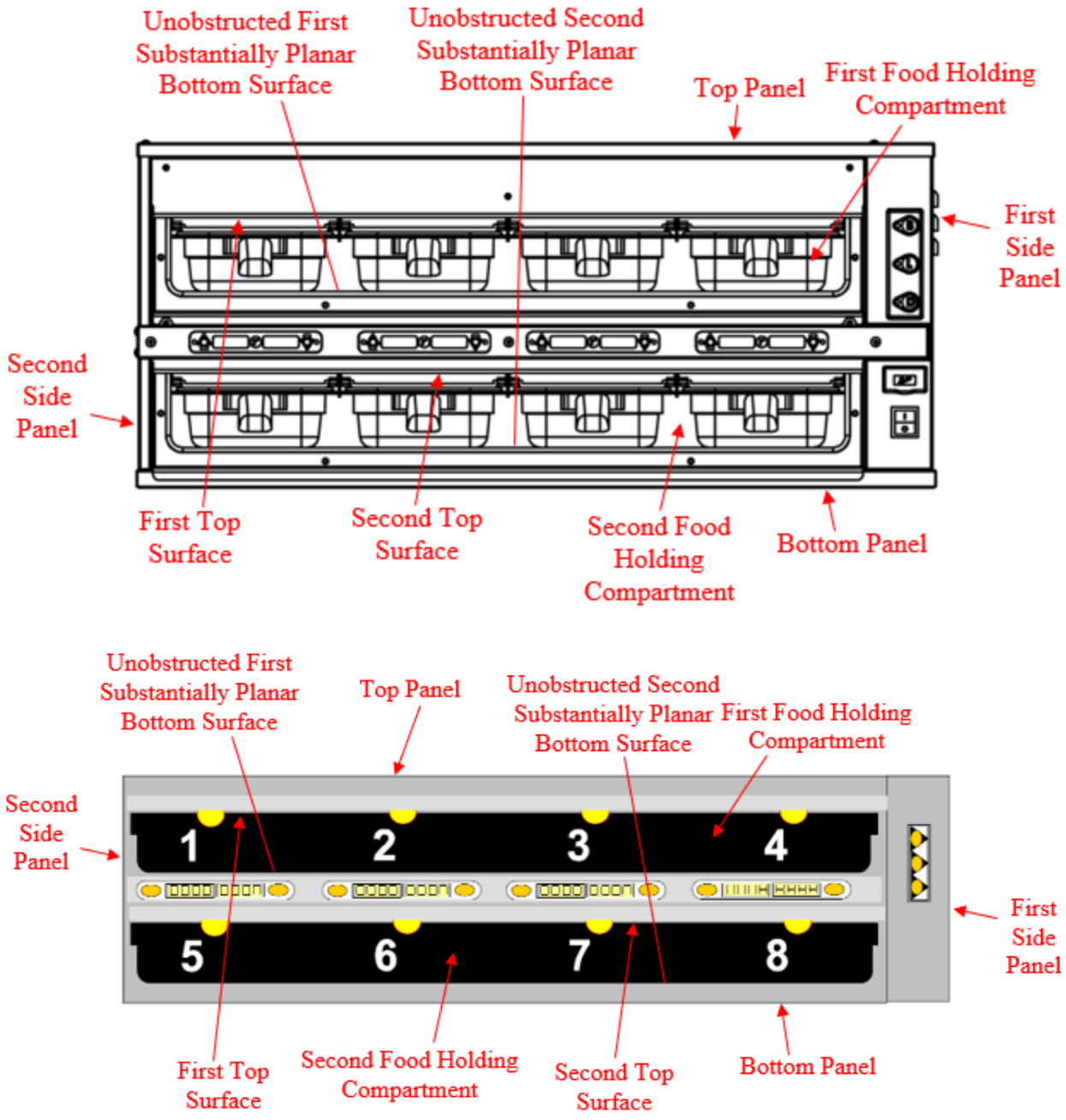


EX1005: 9, 26.

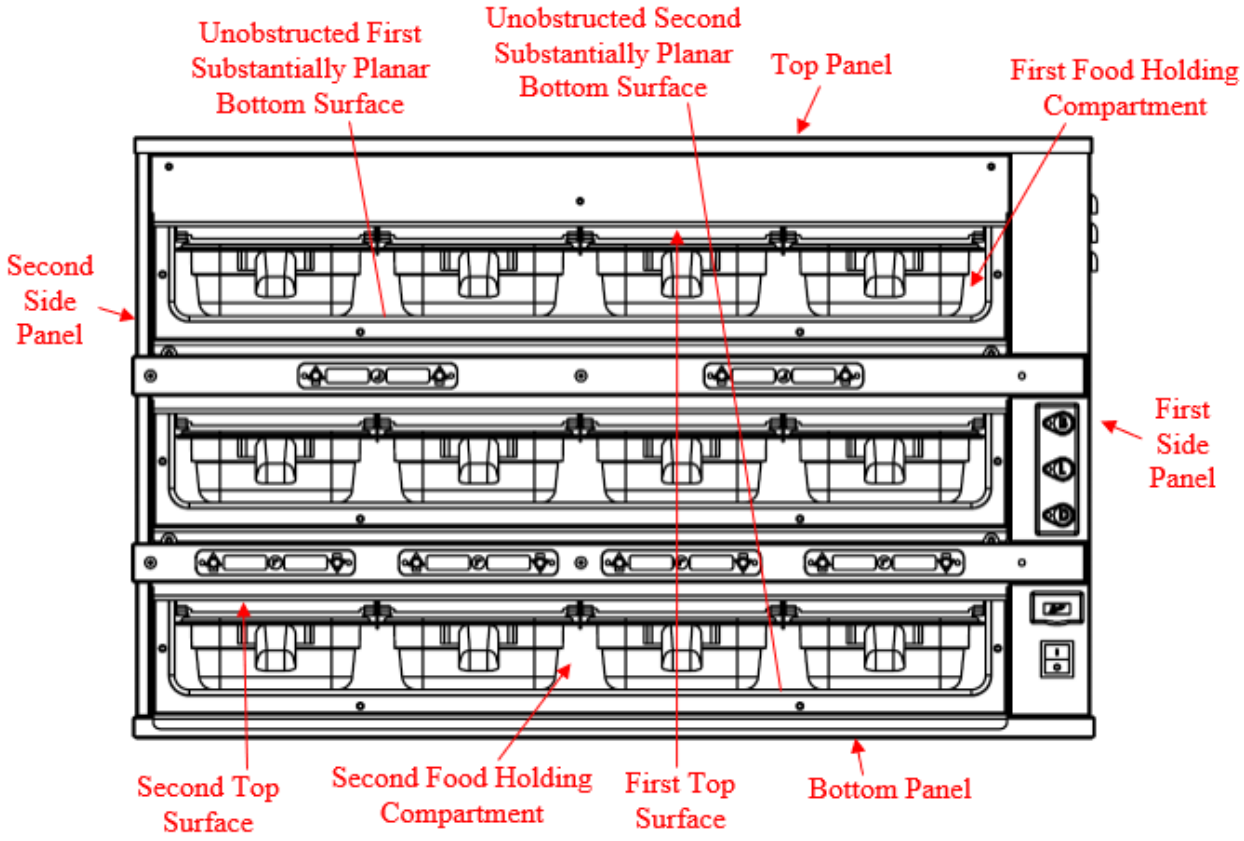
1.a.3/1.a.6/1.a.7

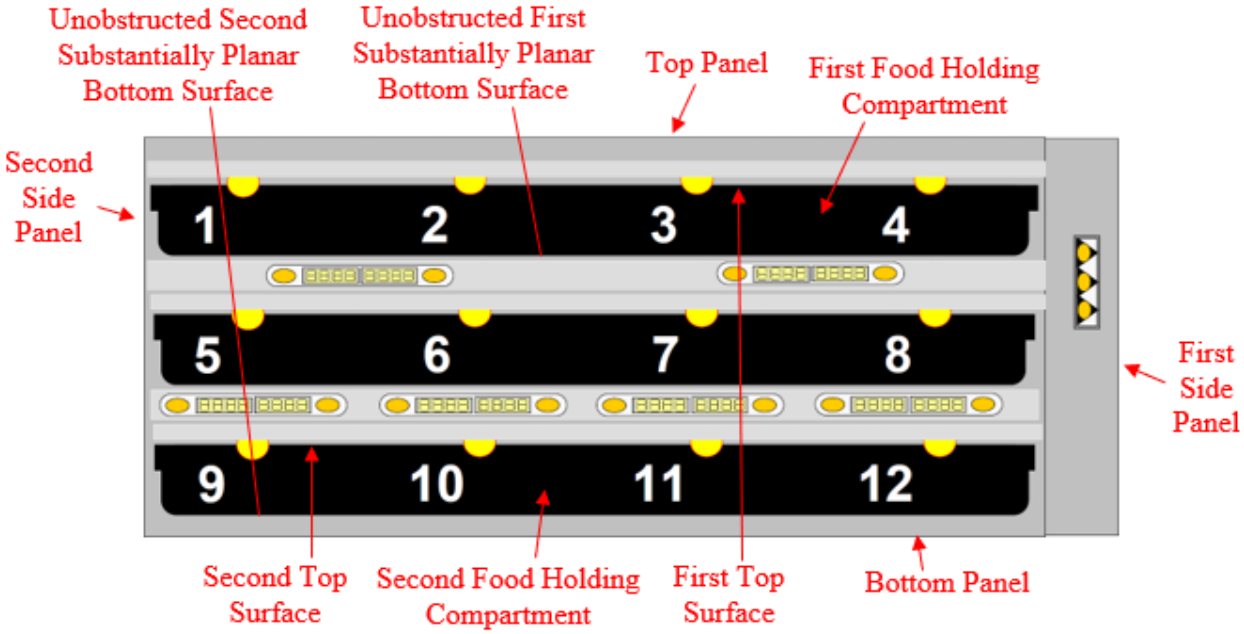
First and second side panels, top panel (first top surface), and first planar bottom surface (unobstructed between side panels) define the first compartment, and the side panels, bottom panel (second planar bottom surface unobstructed between side panels), and second top surface define the second compartment.

EX1003: ¶¶150-151, 159-160, 163.


Unobstructed First Substantially Planar Bottom Surface
Unobstructed Second Substantially Planar Bottom Surface
Top Panel
First Food Holding Compartment
First Side Panel
Second Side Panel
First Top Surface
Second Top Surface
Second Food Holding Compartment
Bottom Panel
Unobstructed First Substantially Planar Bottom Surface
Top Panel
Unobstructed Second Substantially Planar Bottom Surface
First Food Holding Compartment
Second Side Panel
1
2
3
4
5
6
7
8
First Side Panel
First Top Surface
Second Food Holding Compartment
Second Top Surface
Bottom Panel

EX1005: 8, 25.

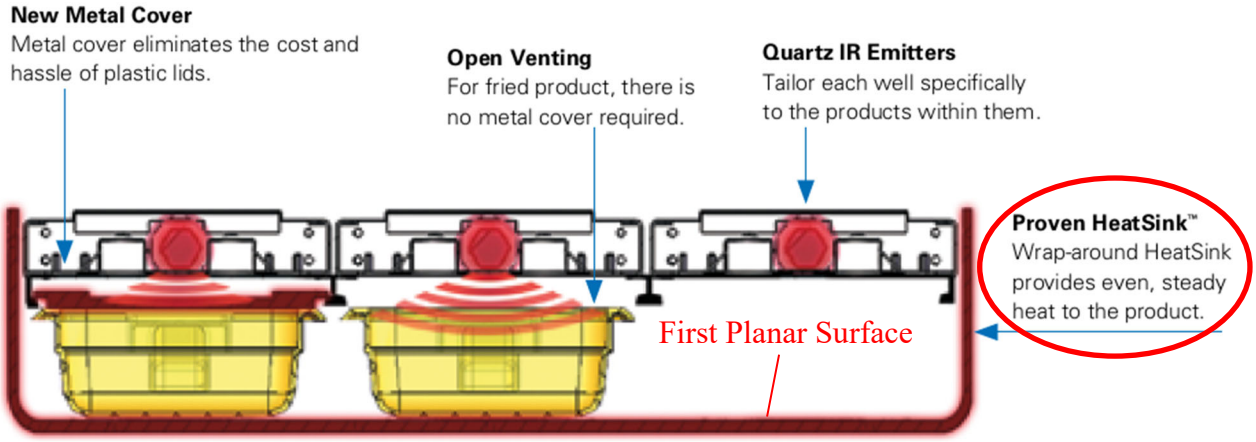

Unobstructed First Substantially Planar Bottom Surface
Unobstructed Second Substantially Planar Bottom Surface
Top Panel
First Food Holding Compartment
Second Side Panel
First Side Panel
Second Top Surface
Second Food Holding Compartment
First Top Surface
Bottom Panel


Unobstructed Second Substantially Planar Bottom Surface
Unobstructed First Substantially Planar Bottom Surface
Top Panel
First Food Holding Compartment
Second Side Panel
1
2
3
4
5
6
7
8
9
10
11
12
First Side Panel
Second Top Surface
Second Food Holding Compartment
First Top Surface
Bottom Panel

EX1005: 9, 26.

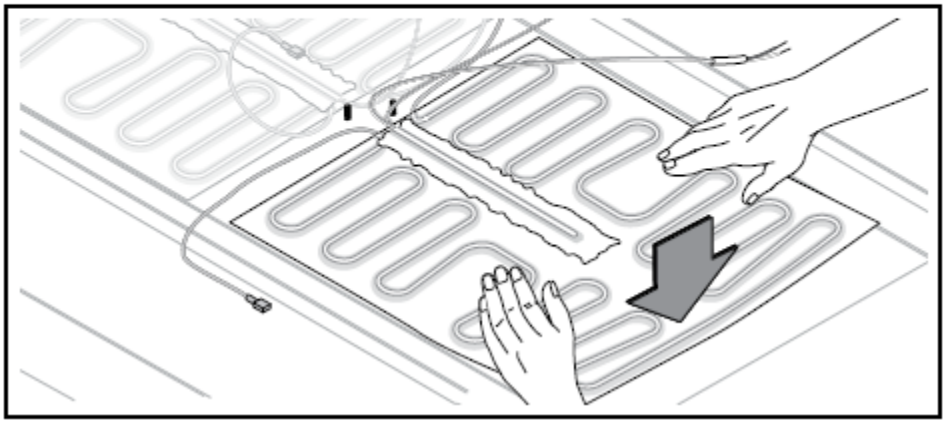
Each planar surface (HeatSink surface) is thermally conductive aluminum.

EX1006: 1; EX1007: 51; EX1005: 16; EX1003: ¶¶152-153, 161-162.



EX1007: 53.

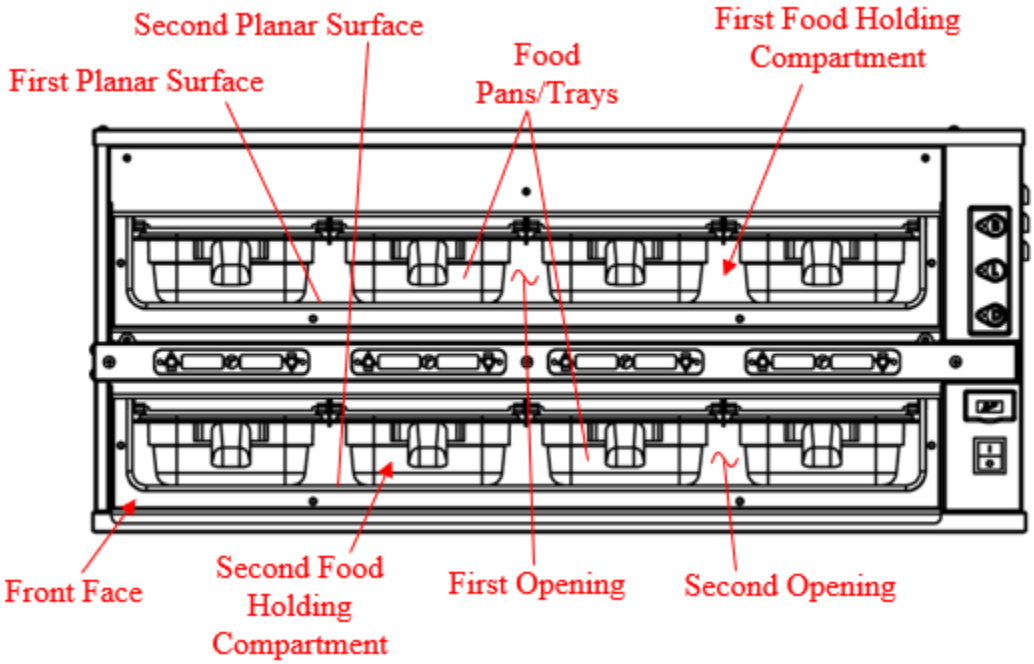
14. Peel the adhesive tape cover off the replacement Heat Element and press in place on the heat sink, ensuring all air bubbles are smoothed out.



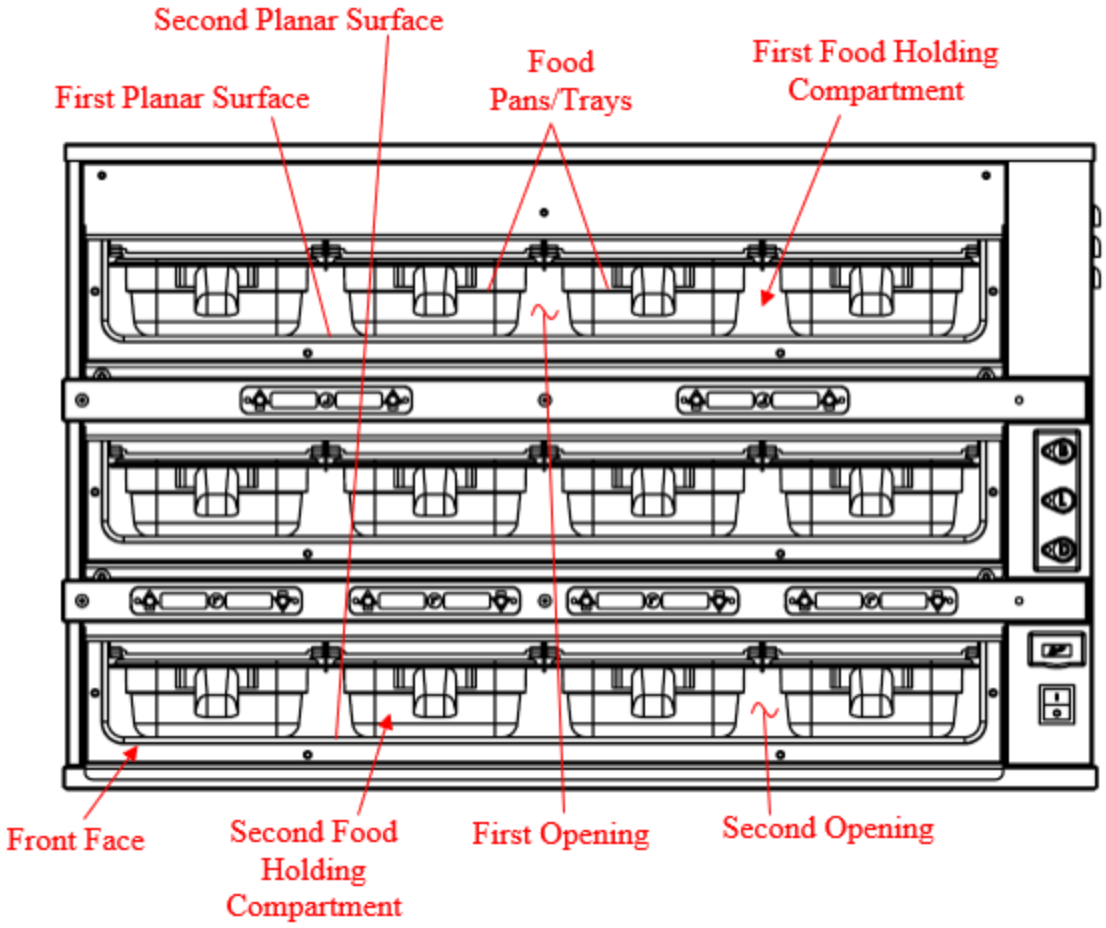
EX1008: 23.

1.a.4/1.a.8

First and second openings through the front face allow tray/pan passage into the first and second compartments onto the respective planar surfaces. EX1003: ¶¶154-155, 164-165.

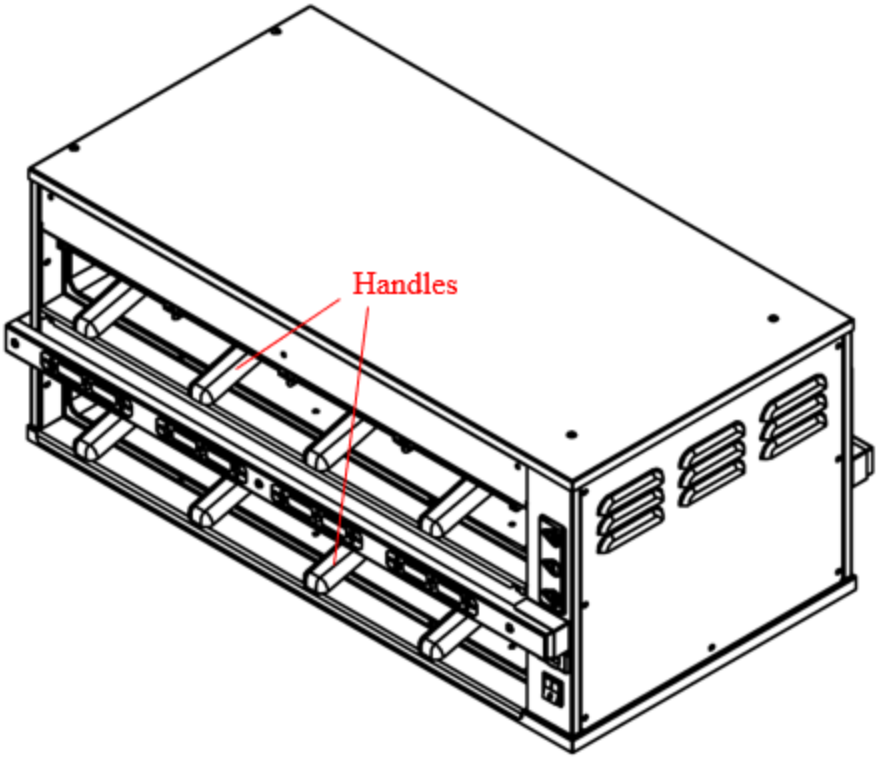


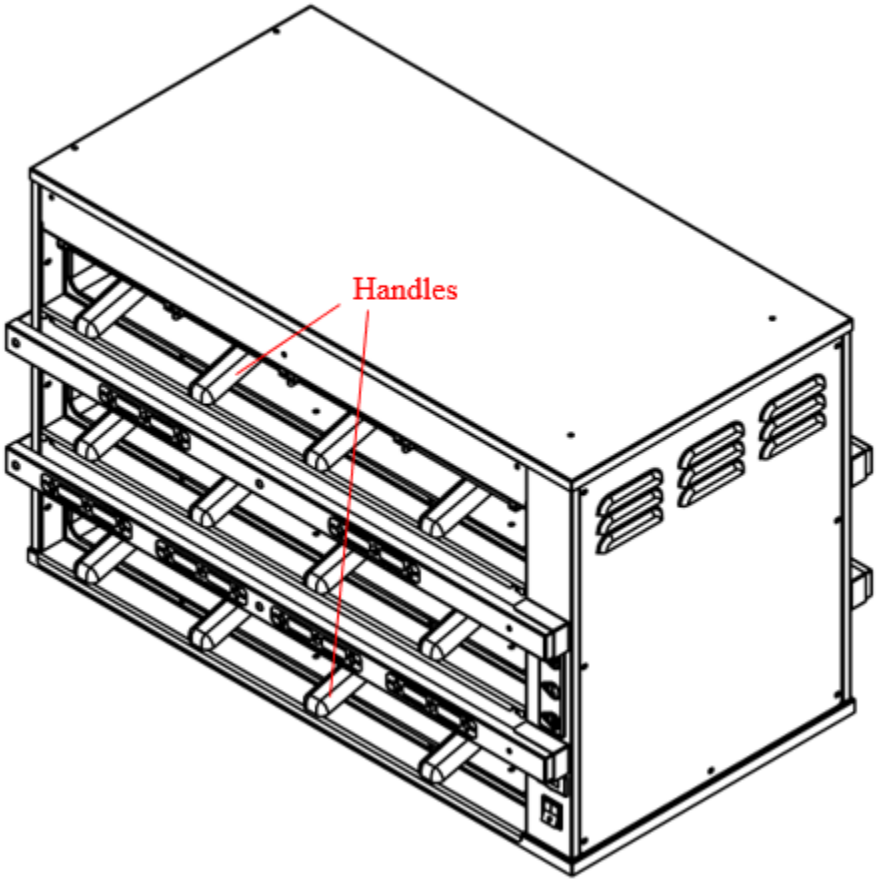
EX1005: 8.



EX1005: 9.

Pan handles protrude for insertion/removal. EX1003: ¶156.


Handles


Handles

EX1005: 8-9.



EX1007: 58.



EX1007: 52.

1.b/1.c/1.d/1.e

IRHS24/IRHS34 holds diverse foods—including fried and broiled, across breakfast and lunch/dinner menus. EX1007: 9, 12; EX1003: ¶¶166-167. IRHS solves "menu proliferation" via "[u]nlimited [menu] flexibility" and

simultaneously holding diverse foods in precise/customized environments/zones for "freedom in product placement" and "optimal quality, consistency and extended hold." EX1007: 31, 33, 51, 53; EX1005: 16; EX1003: ¶168.

Menu Item	Hold Time Increase with New IRHS (%)	Hold Time Increase with New IRHS (min)
EXPEDITE - FRIED		
Chicken Strips	200%	40 min
Nuggets	100%	30 min
MAIN BOARD - FRIED		
Chick'n Crisp	100%	30 min
OCS	500%	30 min
Tendercrisp	150%	45 min
Fish	50%	15 min
MAIN BOARD - BROILED		
Whopper Jr.	78%	45 min
Tendergrill	25%	30 min
1.7 burger	100%	45 min
Whopper	100%	45 min
Turkey Burger	100%	45 min
Stuffed Burger	100%	45 min
Rib Patty	100%	45 min
BKFST		
Eggs	100%	45 min
Sausage Patty	50%	30 min
French Toast Sticks	33%	15 min

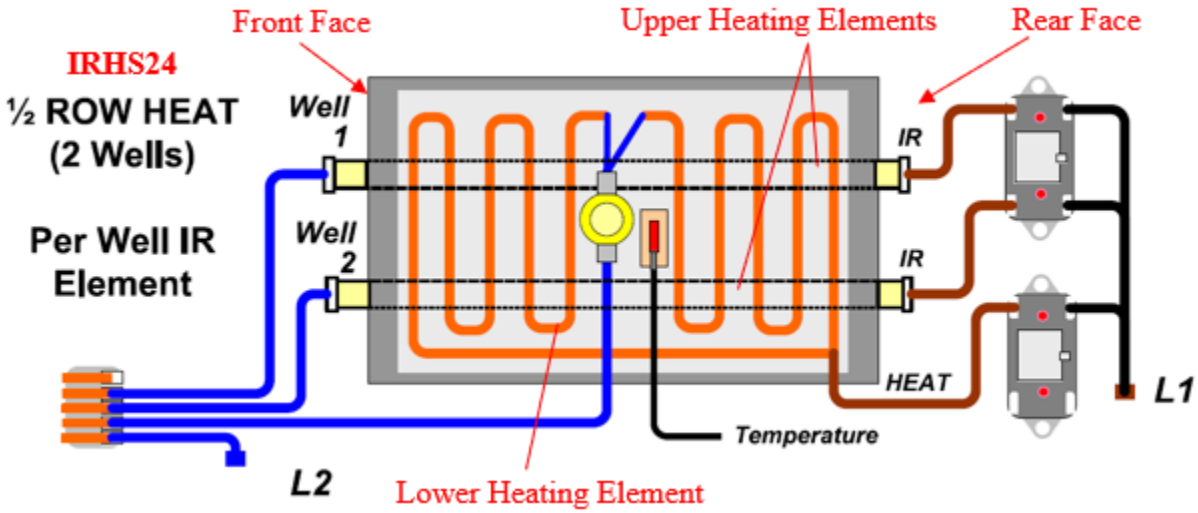
EX1007: 9.

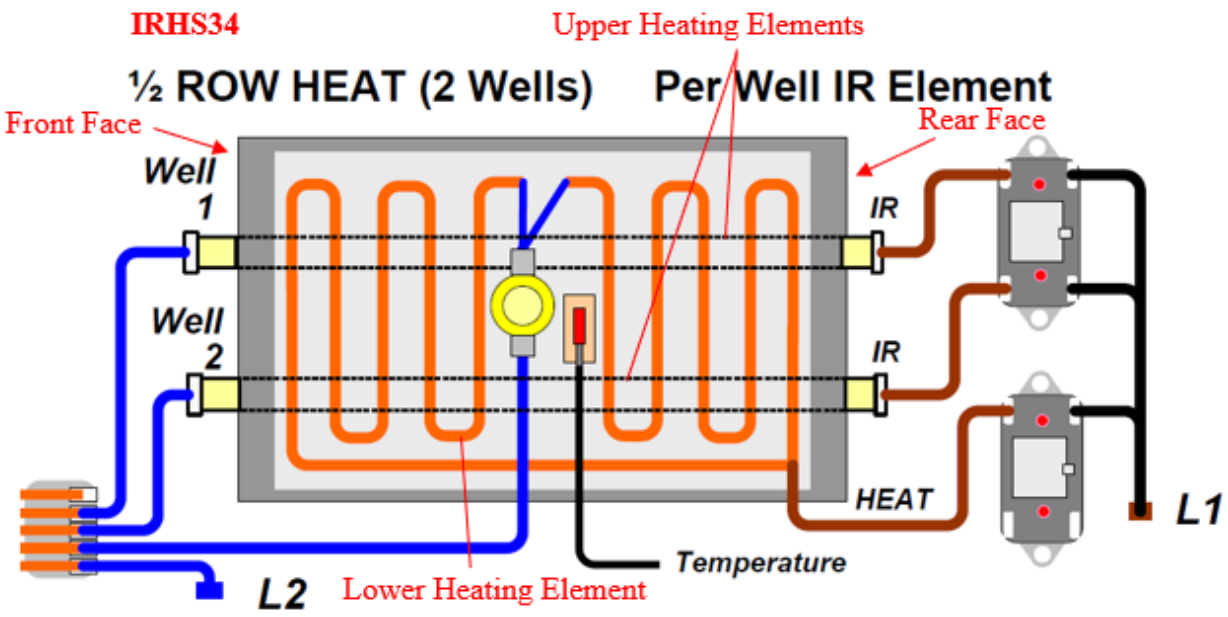


EX1007: 12.

IRHS24 has four zones and IRHS34 has six zones. EX1003: ¶169.

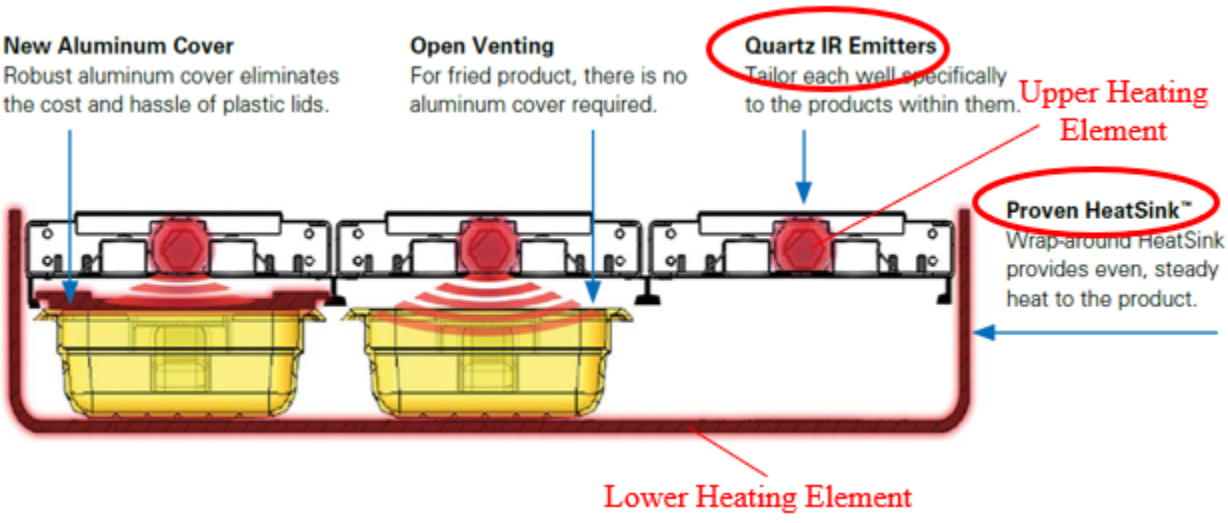
Schematics below represent *one* zone's upper and lower elements. EX1005: 21, 25, 26; EX1007: 53; EX1003: ¶169.



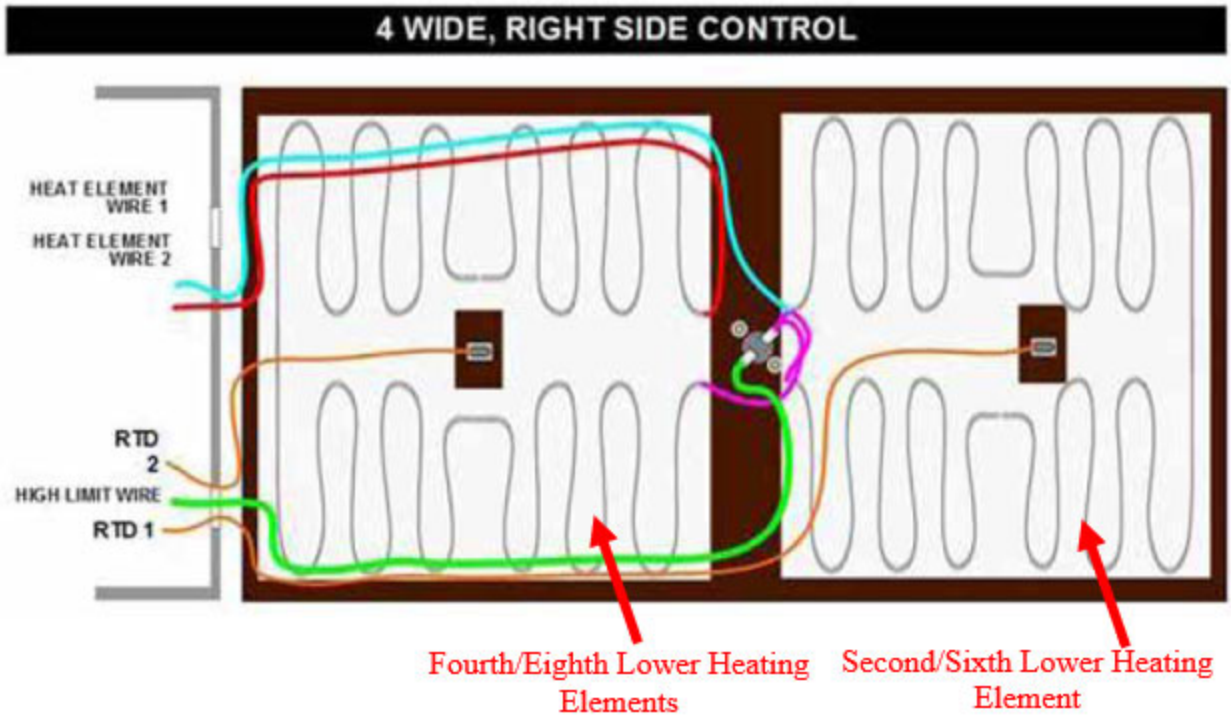


EX1005: 25, 26.

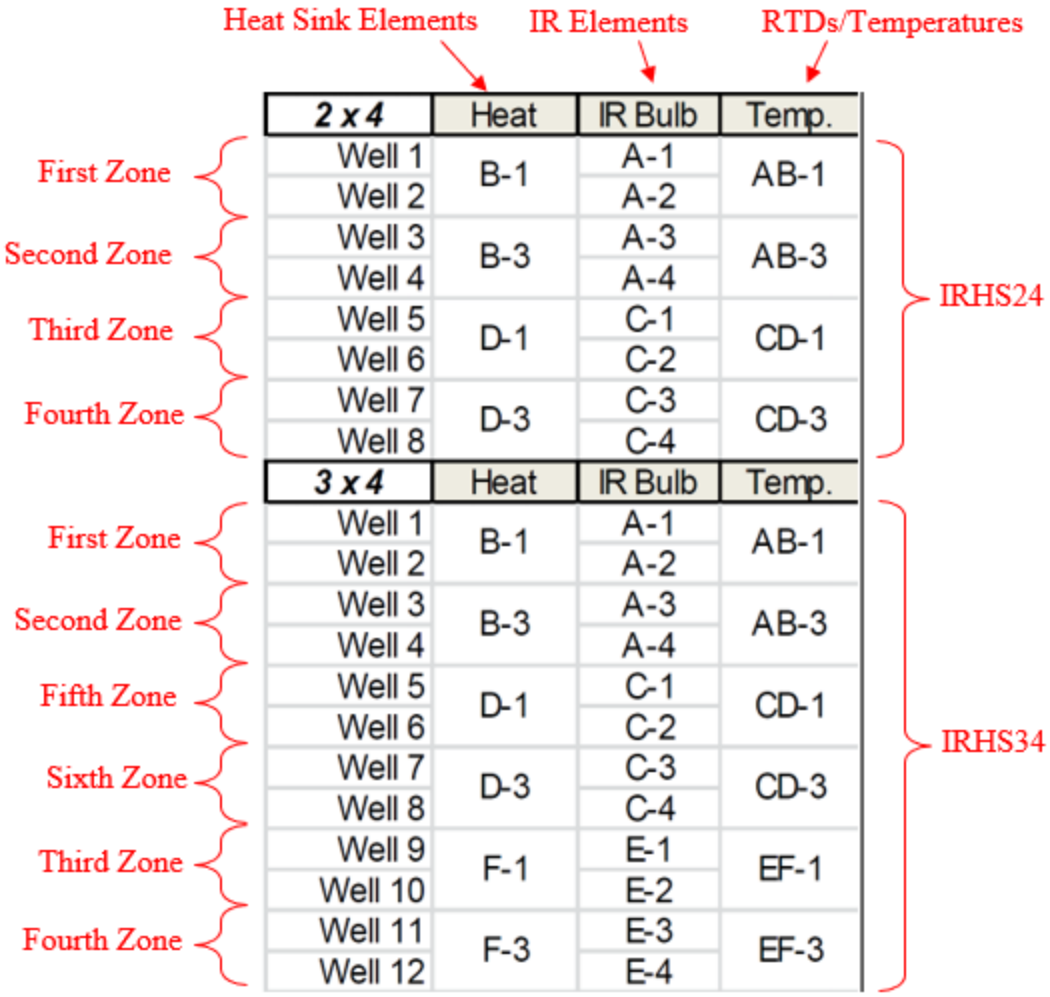
Each zone has two upper IR elements (e.g., first, third, fifth, seventh) and a single lower element (e.g., second, fourth, sixth, eighth). EX1006: 1 ("Upper IR emitters" and "Bottom zoned heat element"); EX1007: 53; EX1003: ¶¶170-173, 212-214, 222-224, 232-234.



EX1007: 53.


4 WIDE, RIGHT SIDE CONTROL
HEAT ELEMENT WIRE 1
HEAT ELEMENT WIRE 2
RTD 2
HIGH LIMIT WIRE
RTD 1
Fourth/Eighth Lower Heating Elements
Second/Sixth Lower Heating Element

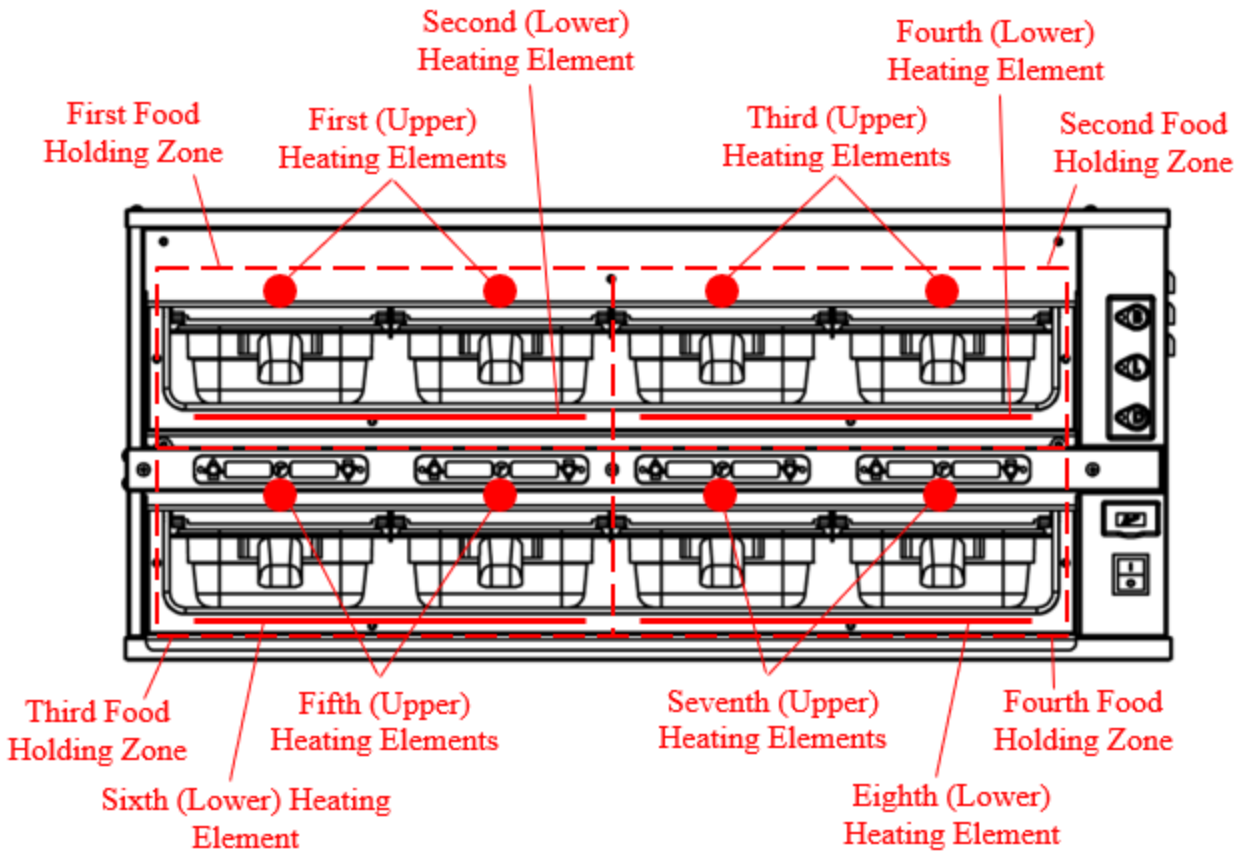
EX1008: 58.

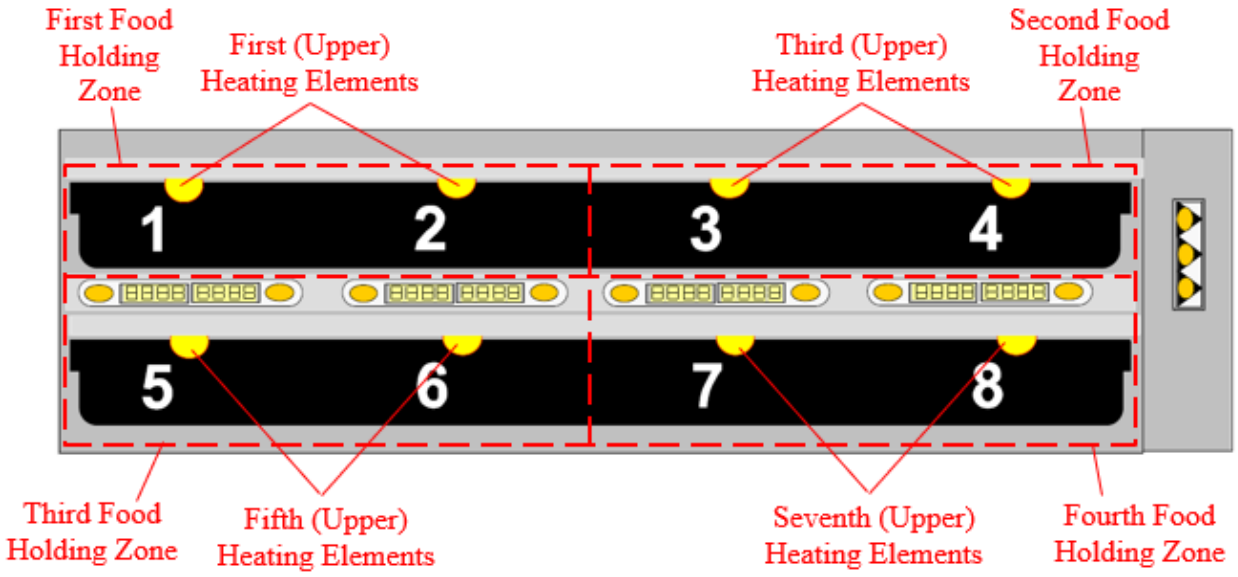


2 x 4	Heat	IR Bulb	Temp.
Well 1	B-1	A-1	AB-1
Well 2		A-2	
Well 3	B-3	A-3	AB-3
Well 4		A-4	
Well 5	D-1	C-1	CD-1
Well 6		C-2	
Well 7	D-3	C-3	CD-3
Well 8		C-4	

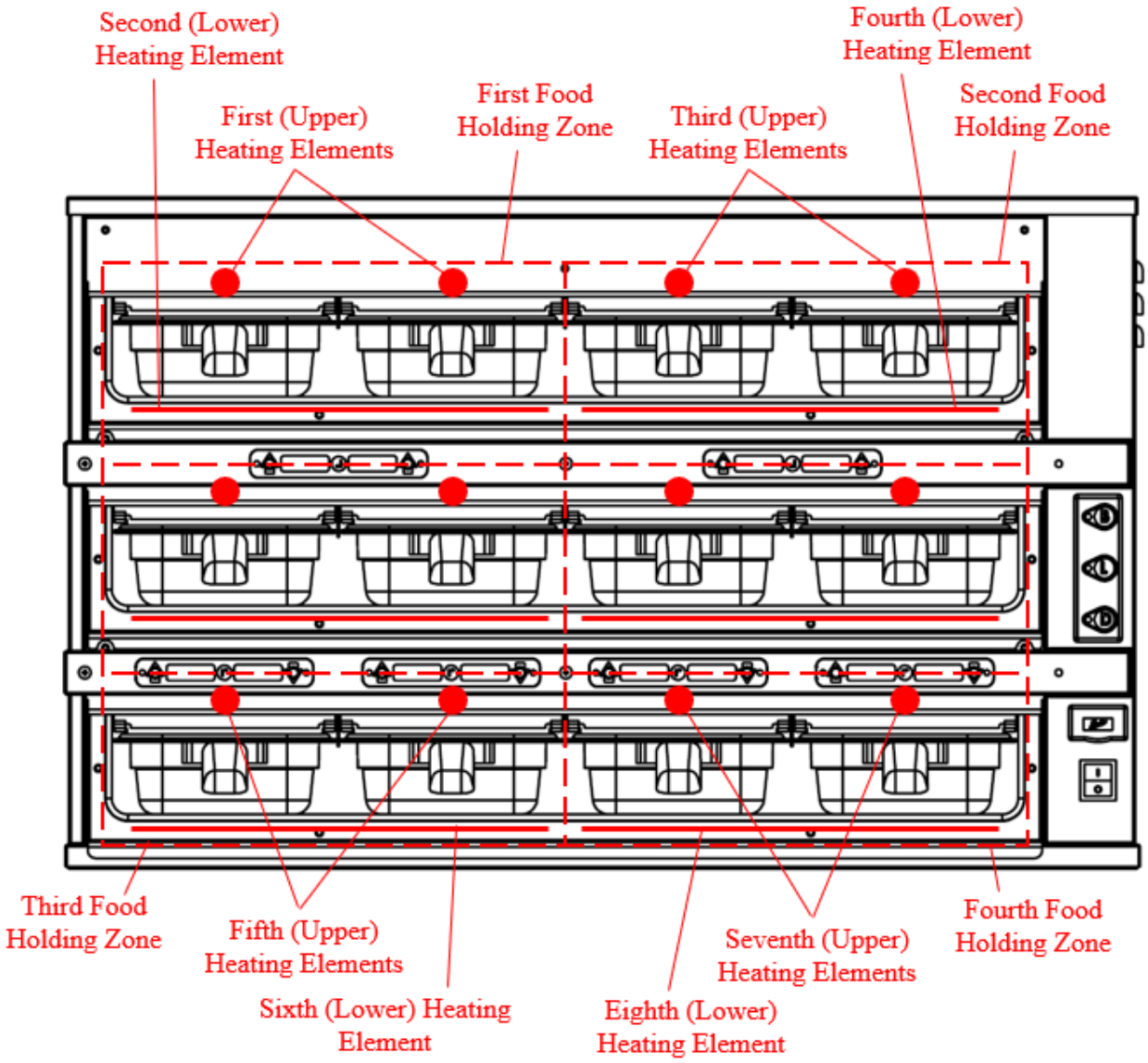
3 x 4	Heat	IR Bulb	Temp.
Well 1	B-1	A-1	AB-1
Well 2		A-2	
Well 3	B-3	A-3	AB-3
Well 4		A-4	
Well 5	D-1	C-1	CD-1
Well 6		C-2	
Well 7	D-3	C-3	CD-3
Well 8		C-4	
Well 9	F-1	E-1	EF-1
Well 10		E-2	
Well 11	F-3	E-3	EF-3
Well 12		E-4	

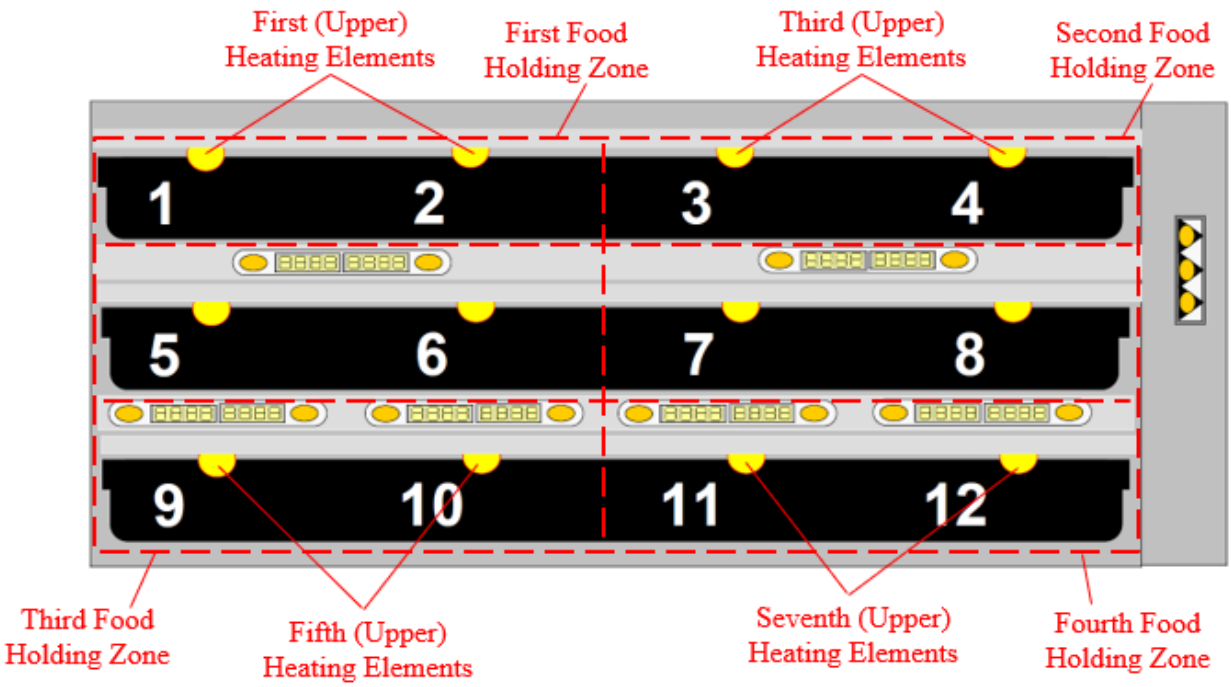
EX1008: 64.


Second (Lower)
Heating Element
Fourth (Lower)
Heating Element
First Food
Holding Zone
First (Upper)
Heating Elements
Third (Upper)
Heating Elements
Second Food
Holding Zone
Third Food
Holding Zone
Fifth (Upper)
Heating Elements
Seventh (Upper)
Heating Elements
Fourth Food
Holding Zone
Sixth (Lower) Heating
Element
Eighth (Lower)
Heating Element


First Food
Holding
Zone
First (Upper)
Heating Elements
Third (Upper)
Heating Elements
Second Food
Holding
Zone
1
2
3
4
5
6
7
8
Third Food
Holding Zone
Fifth (Upper)
Heating Elements
Seventh (Upper)
Heating Elements
Fourth Food
Holding Zone

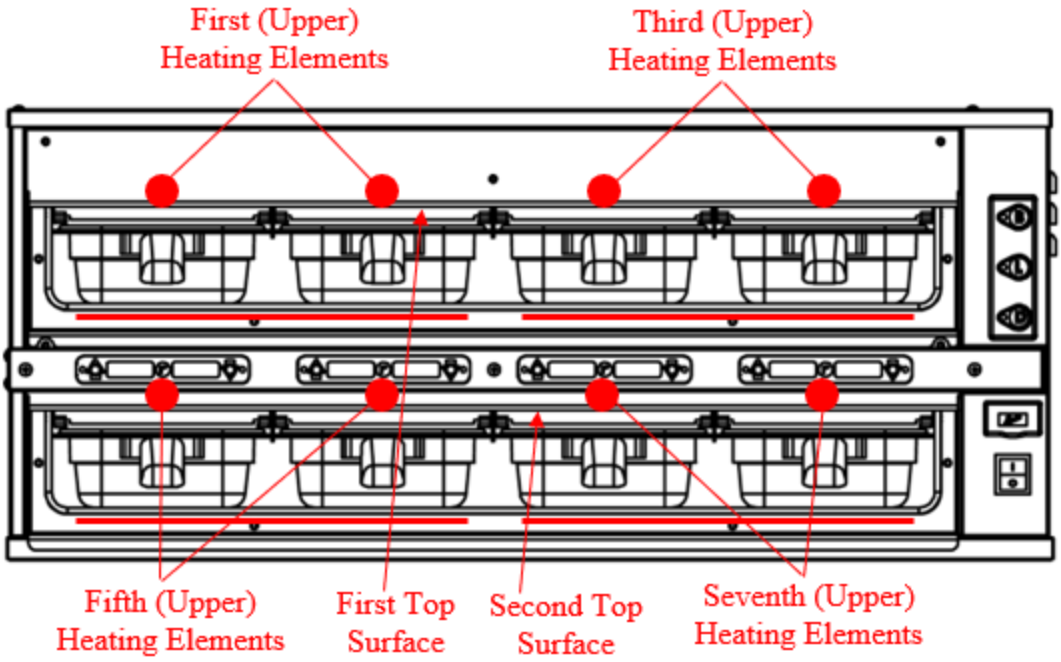
EX1005: 8, 25.

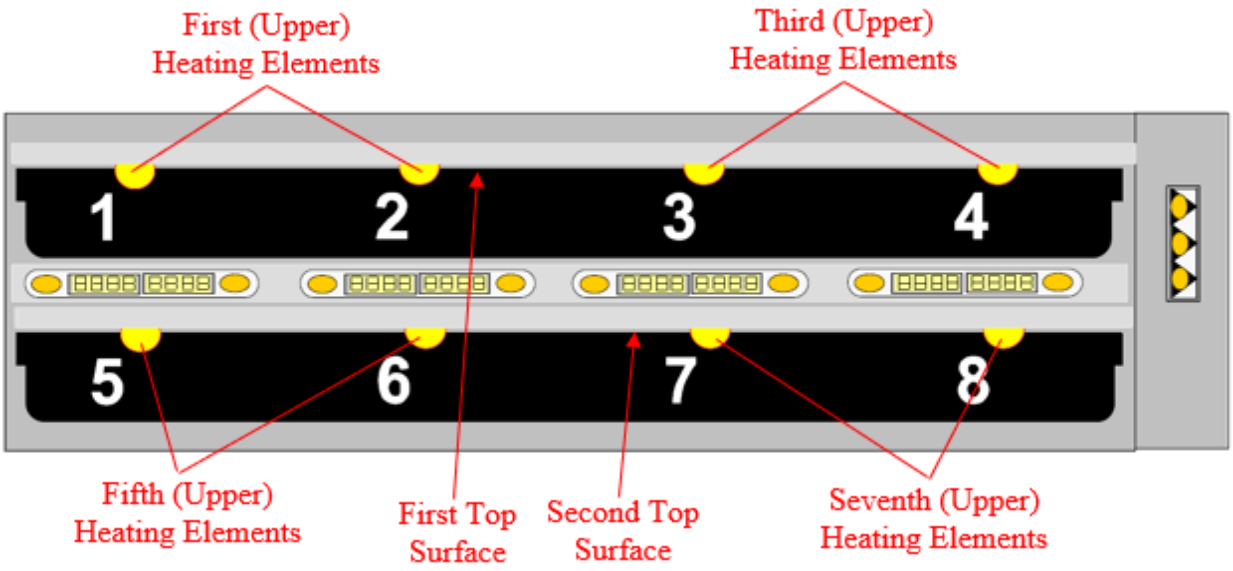

Second (Lower) Heating Element
First (Upper) Heating Elements
First Food Holding Zone
Third (Upper) Heating Elements
Fourth (Lower) Heating Element
Second Food Holding Zone
Third Food Holding Zone
Fifth (Upper) Heating Elements
Sixth (Lower) Heating Element
Eighth (Lower) Heating Element
Seventh (Upper) Heating Elements
Fourth Food Holding Zone



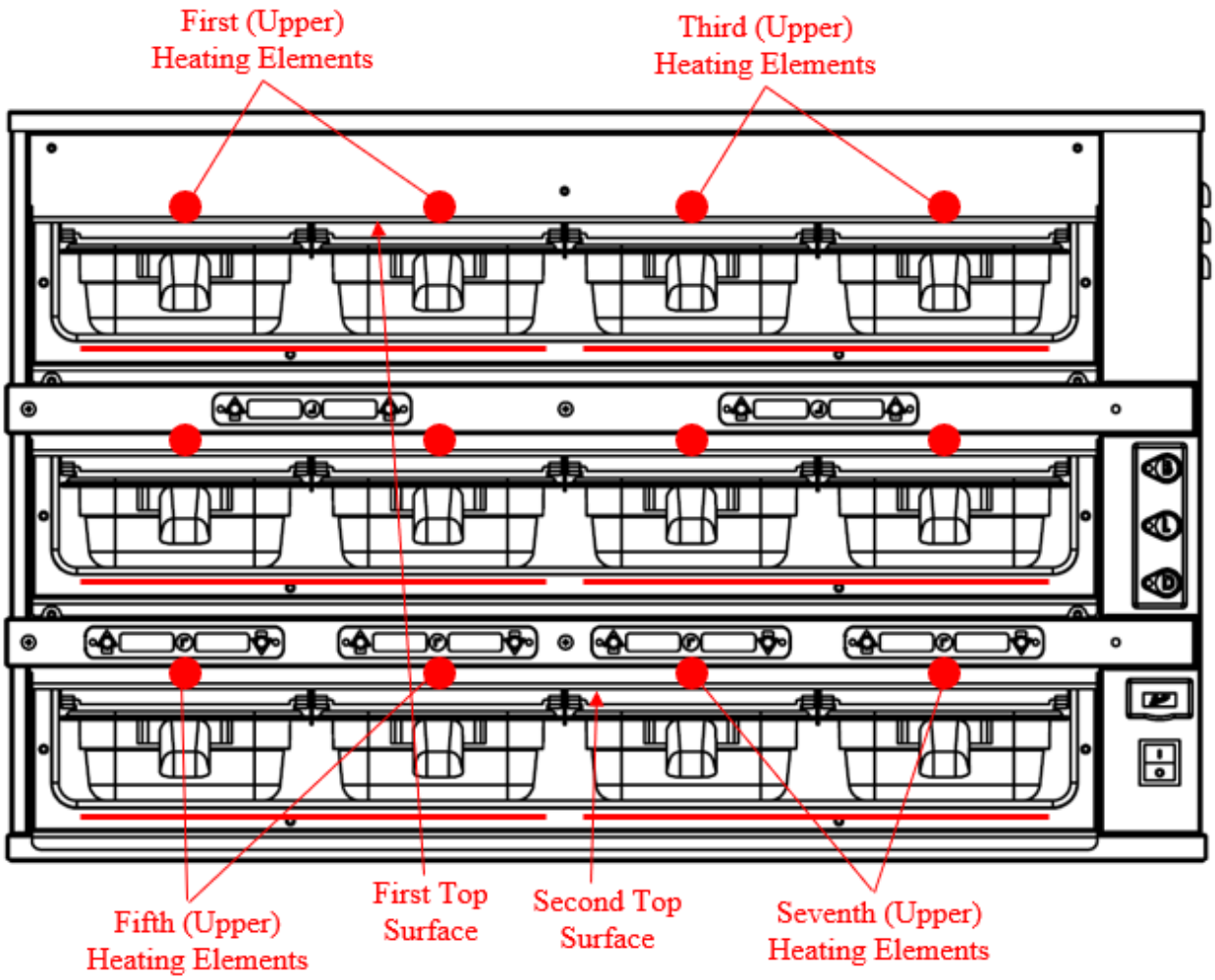
EX1005: 9, 26.

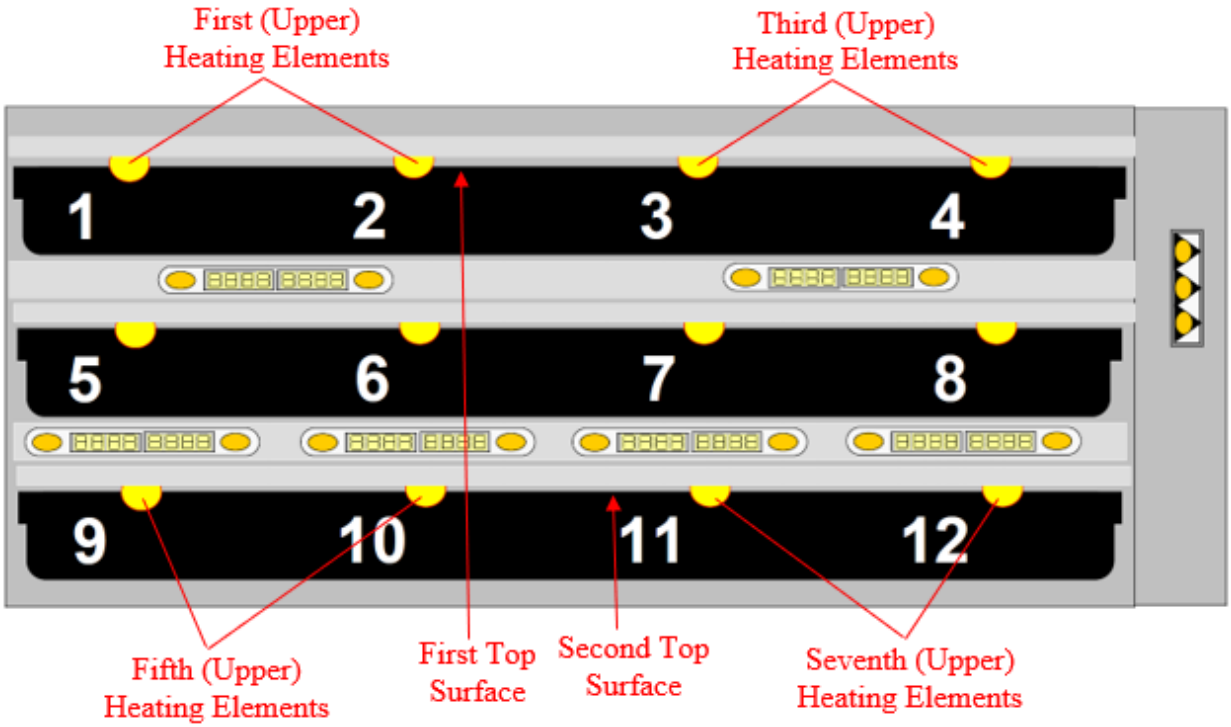
The first and second top surfaces (of respective sheet metal plates) are below the IR elements, which heat the plates/top surfaces and thus are thermally coupled thereto. EX1003: ¶¶174-176, 215-216, 225-226, 235-236.


First (Upper)
Heating Elements
Third (Upper)
Heating Elements
Fifth (Upper)
Heating Elements
First Top
Surface
Second Top
Surface
Seventh (Upper)
Heating Elements

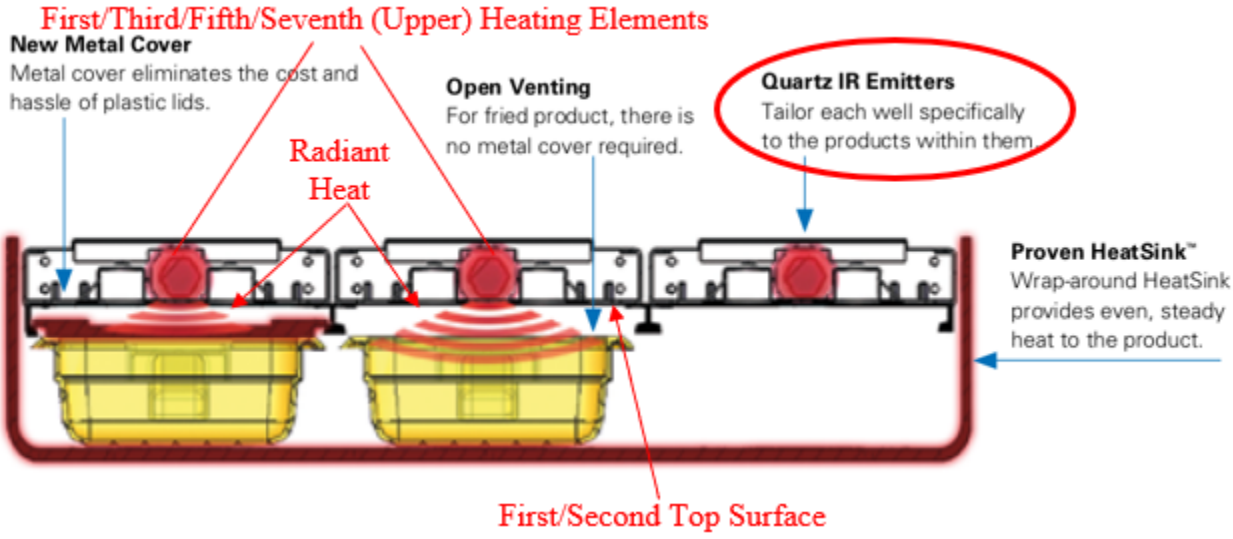

First (Upper)
Heating Elements
Third (Upper)
Heating Elements
1
2
3
4
5
6
7
8
Fifth (Upper)
Heating Elements
First Top
Surface
Second Top
Surface
Seventh (Upper)
Heating Elements

EX1005: 8, 25.

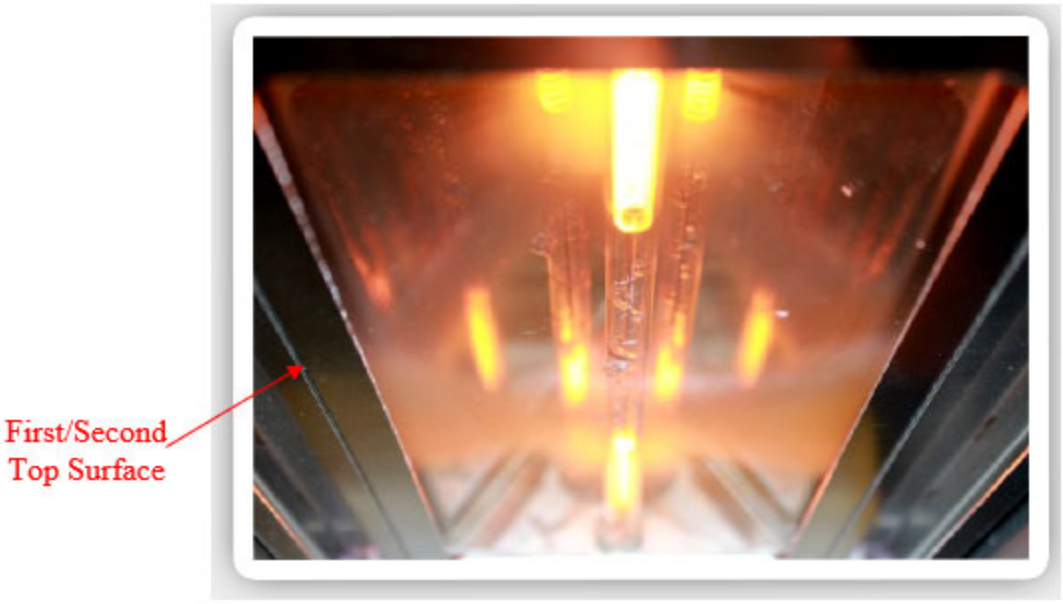

First (Upper)
Heating Elements
Third (Upper)
Heating Elements
Fifth (Upper)
Heating Elements
First Top
Surface
Second Top
Surface
Seventh (Upper)
Heating Elements



EX1005: 9, 26.

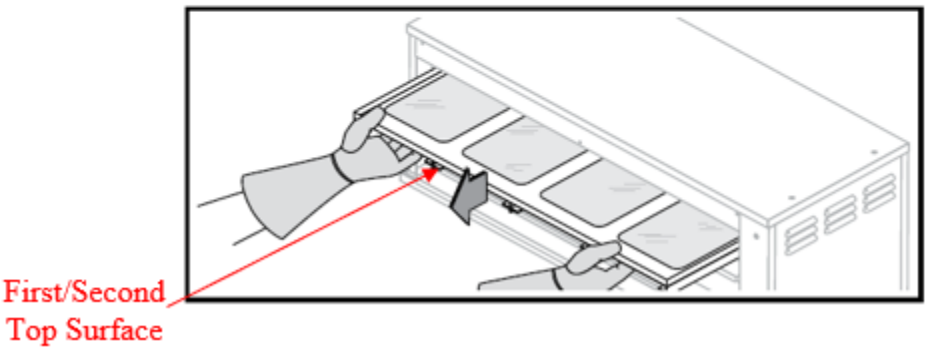


EX1007: 53.



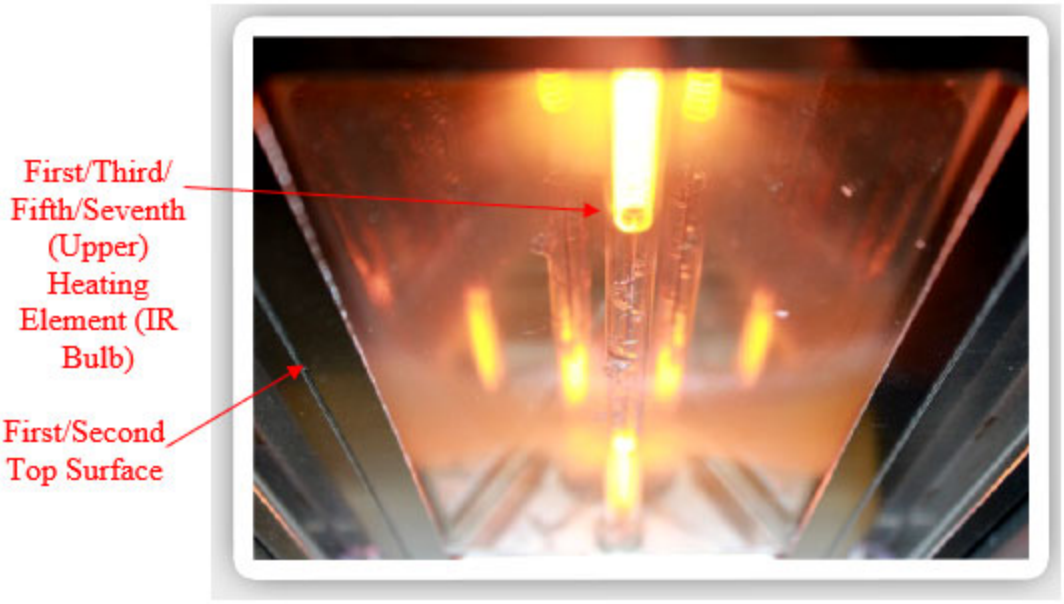
EX1007: 11.

NOTE: Make sure the glass has cooled off sufficiently to avoid burns to bare skin. Use gloves if necessary.

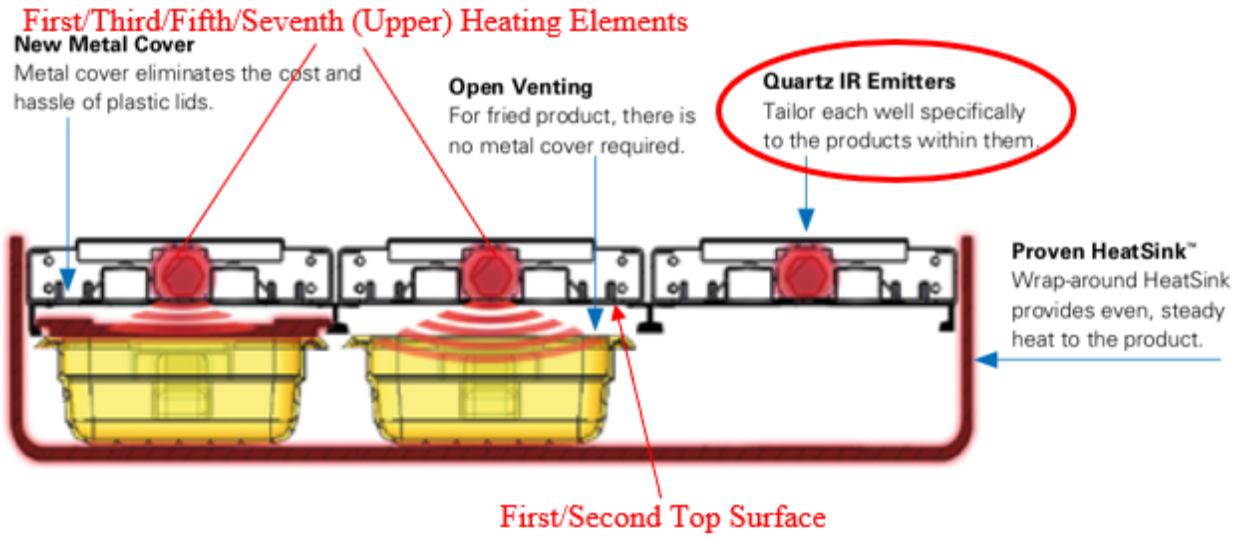


EX1008: 25.

Moreover, the IR elements heat and are connected to structure (sockets, hoods, reflectors) further thermally coupling the elements to the plates/top surfaces. EX1003: ¶¶177, 217, 227, 237.



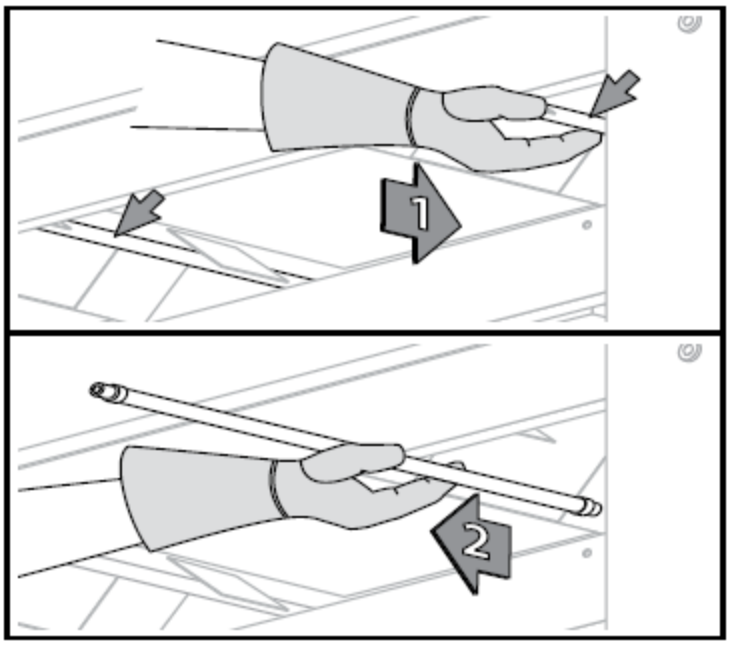
EX1007: 11.



EX1007: 53.

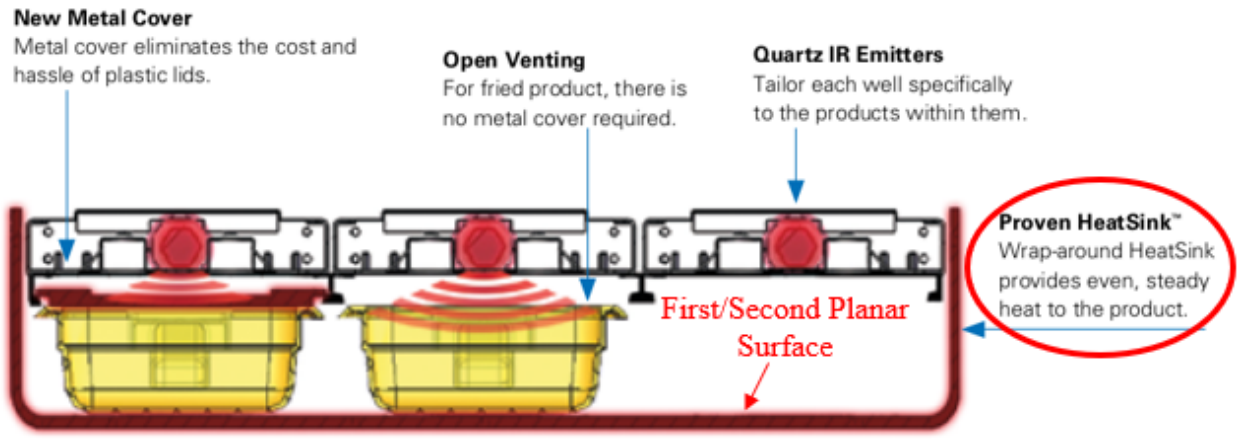
6. The Emitter Sockets are spring-loaded. Push the Emitter towards the rear socket until the Emitter is free from the front socket and carefully remove.

NOTE: DO NOT TOUCH THE EMITTER WITH BARE HANDS! The oil on human skin will shorten the life of the Emitters. If the Emitter is to be reused, use clean gloves, a clean cloth, or a clean paper towel to handle.



EX1008: 27.

The lower elements are affixed to and conductively heat respective HeatSink plates/planar surfaces and thus are thermally coupled thereto. EX1007: 51, 53; EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1003: ¶¶178-180, 218-219, 228-229, 238-239.



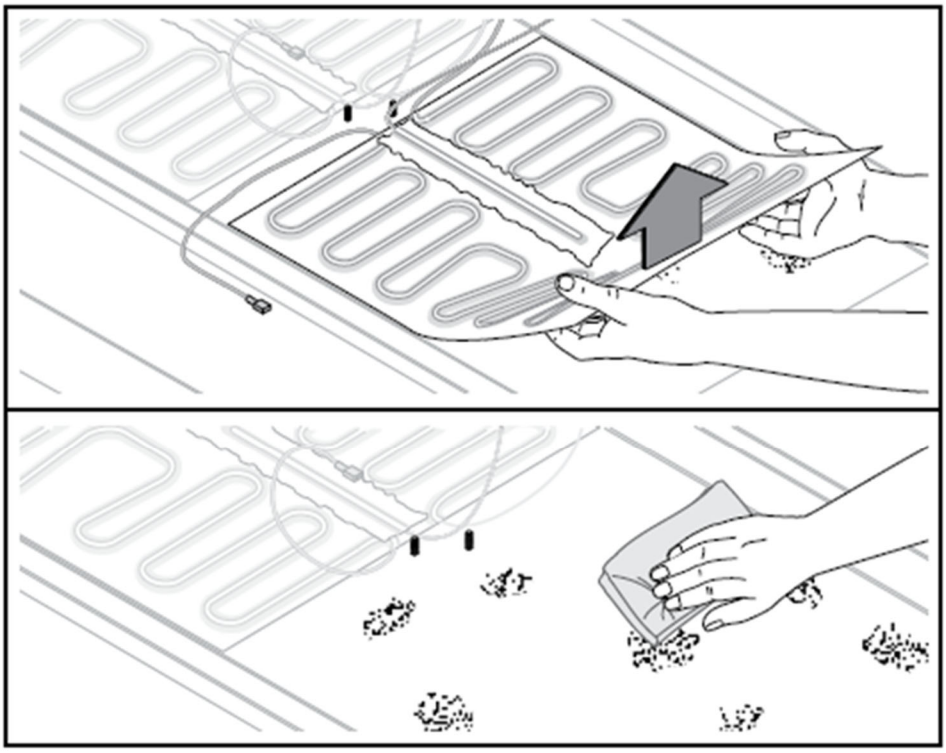
EX1007: 53.

HEAT ELEMENTS

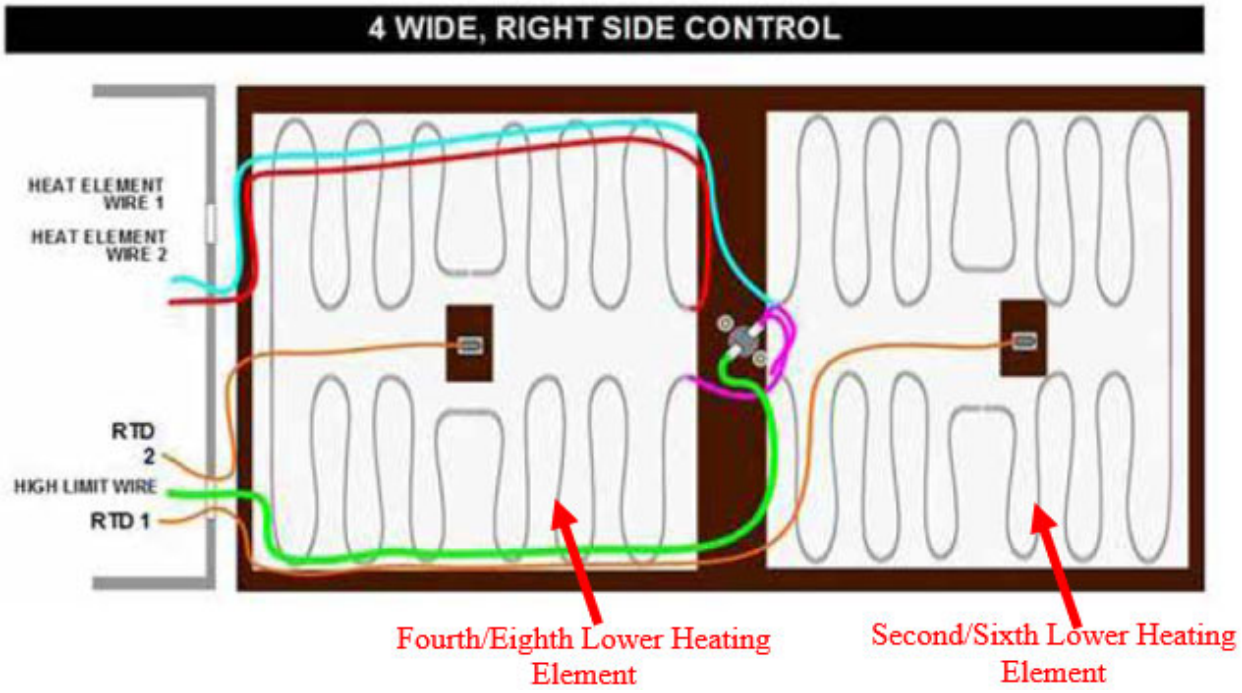
The Heat Elements provide the heating required to keep the heating wells at proper operating temperatures. The quantity varies depending on model and are affixed to the bottom of each Heat Sink.

EX1008: 21.

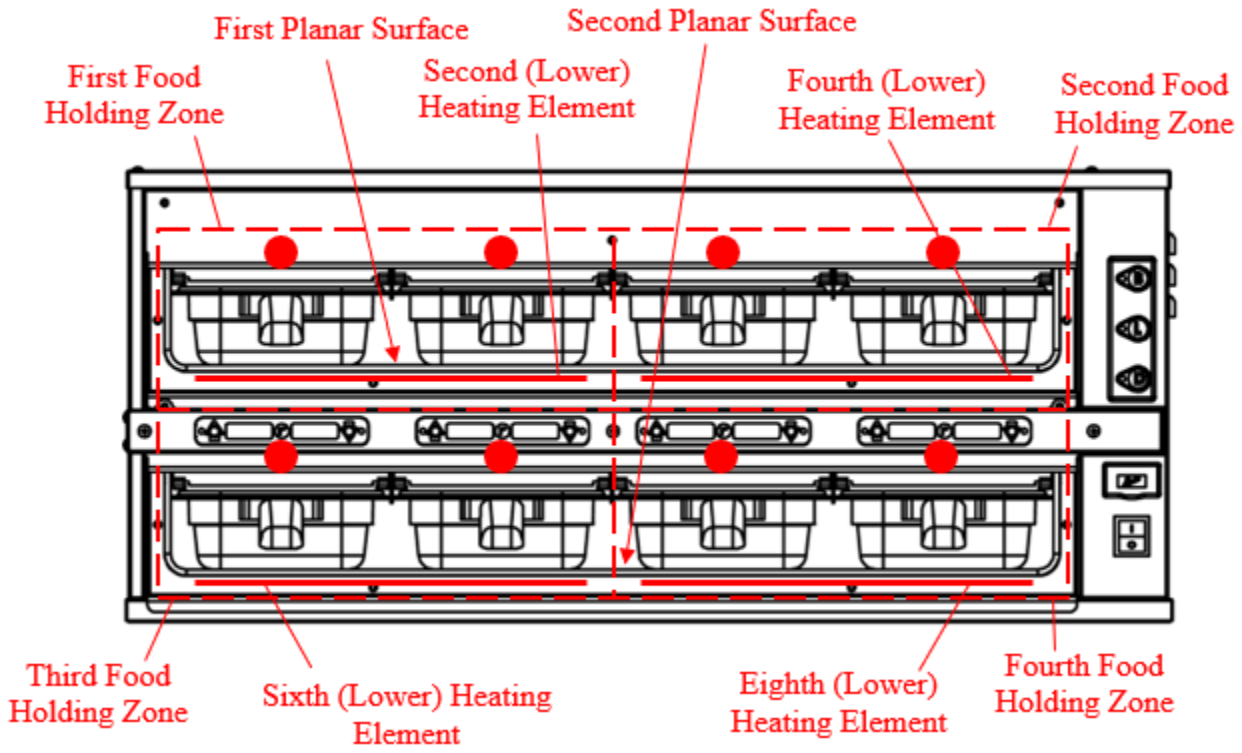
13. Remove the affected Heat Element by peeling off from the heat sink. Ensure any excess tape and/ or adhesive is removed.



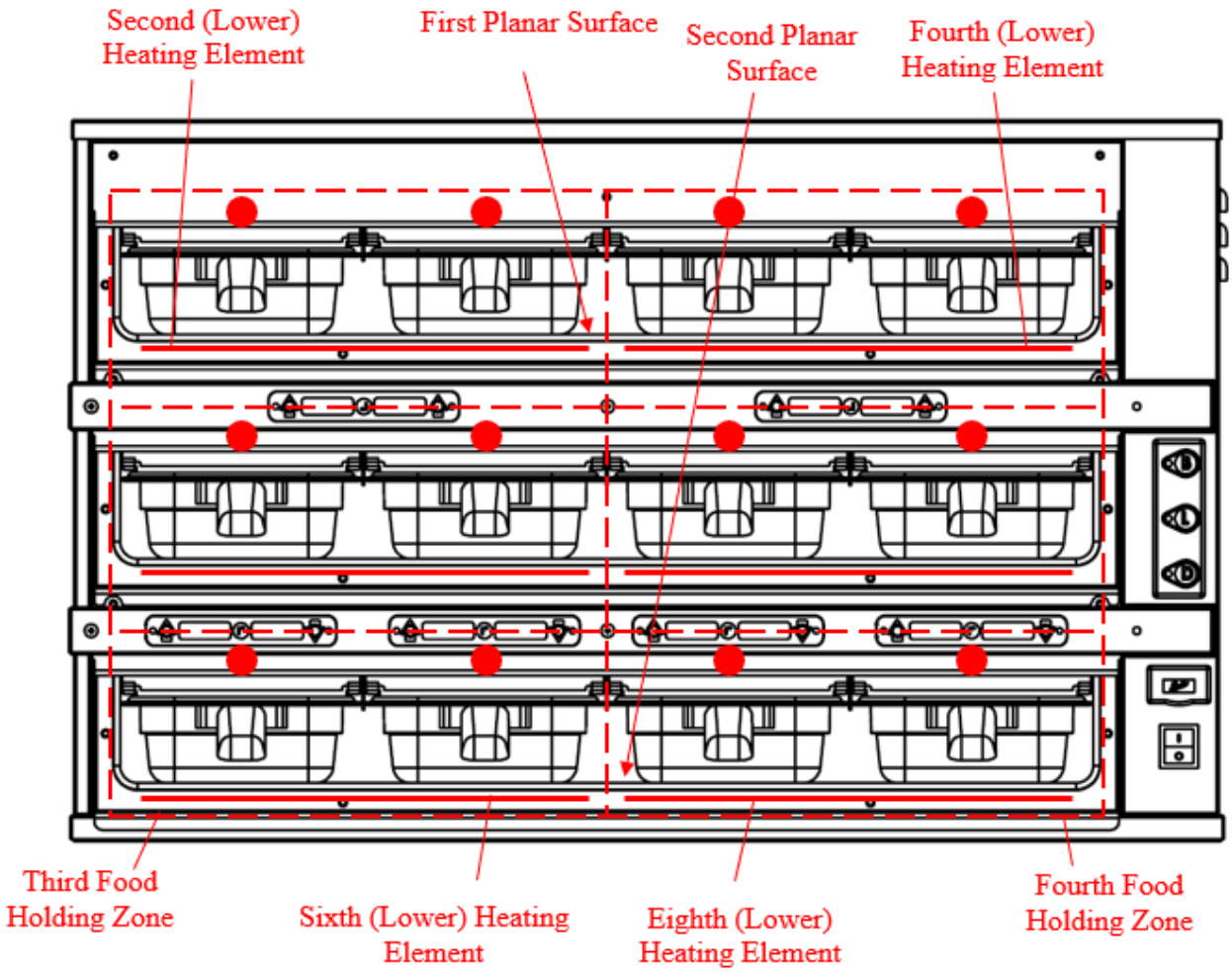
EX1008: 22.



EX1008: 58.



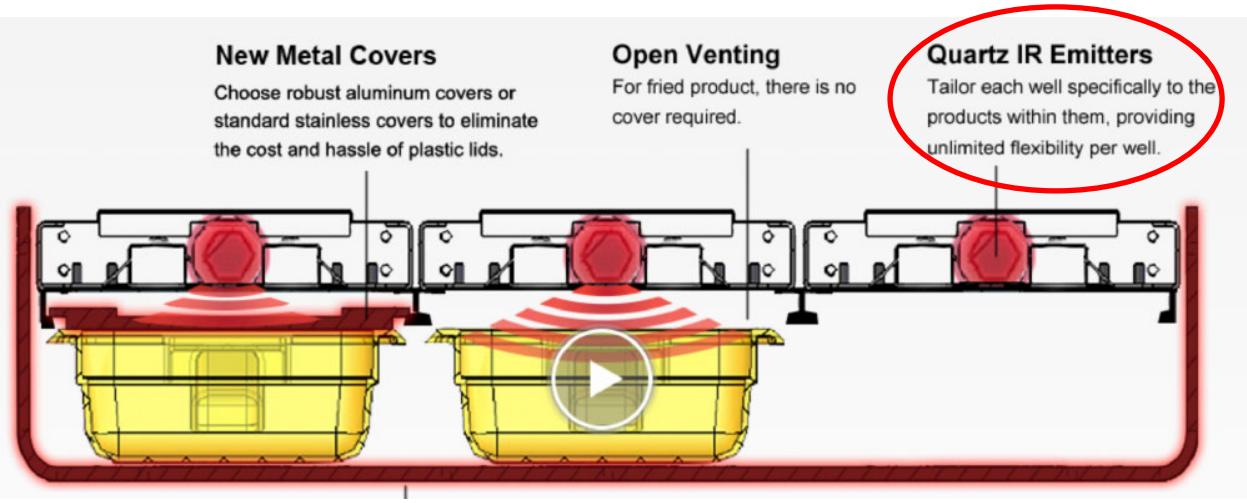
EX1005: 8.



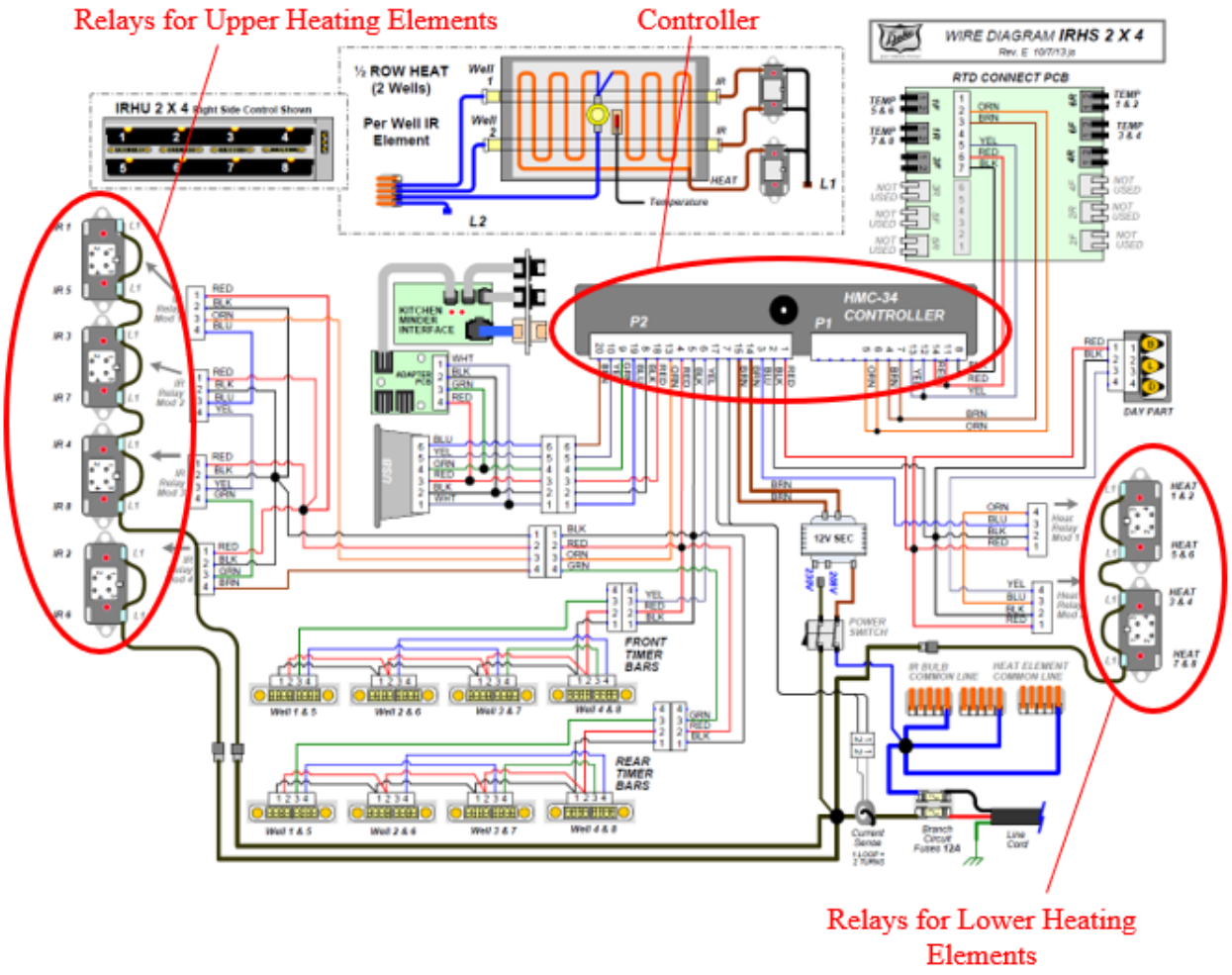
EX1005: 9.

The controller operates each zone's upper and lower elements independently from each other and other zones' elements. EX1005: 16 ("[t]his new technology allows you to precisely control the environment in each pan, allowing customized settings for each food product" and "each food product has a tailored HeatSink temperature and InfraRed pulse rate"), 25-26; EX1006: 1; EX1007: 53 ("Precise holding for each product in an optimized environment tailored to that product" and "Total well independence allows freedom in product placement in the IRHS");

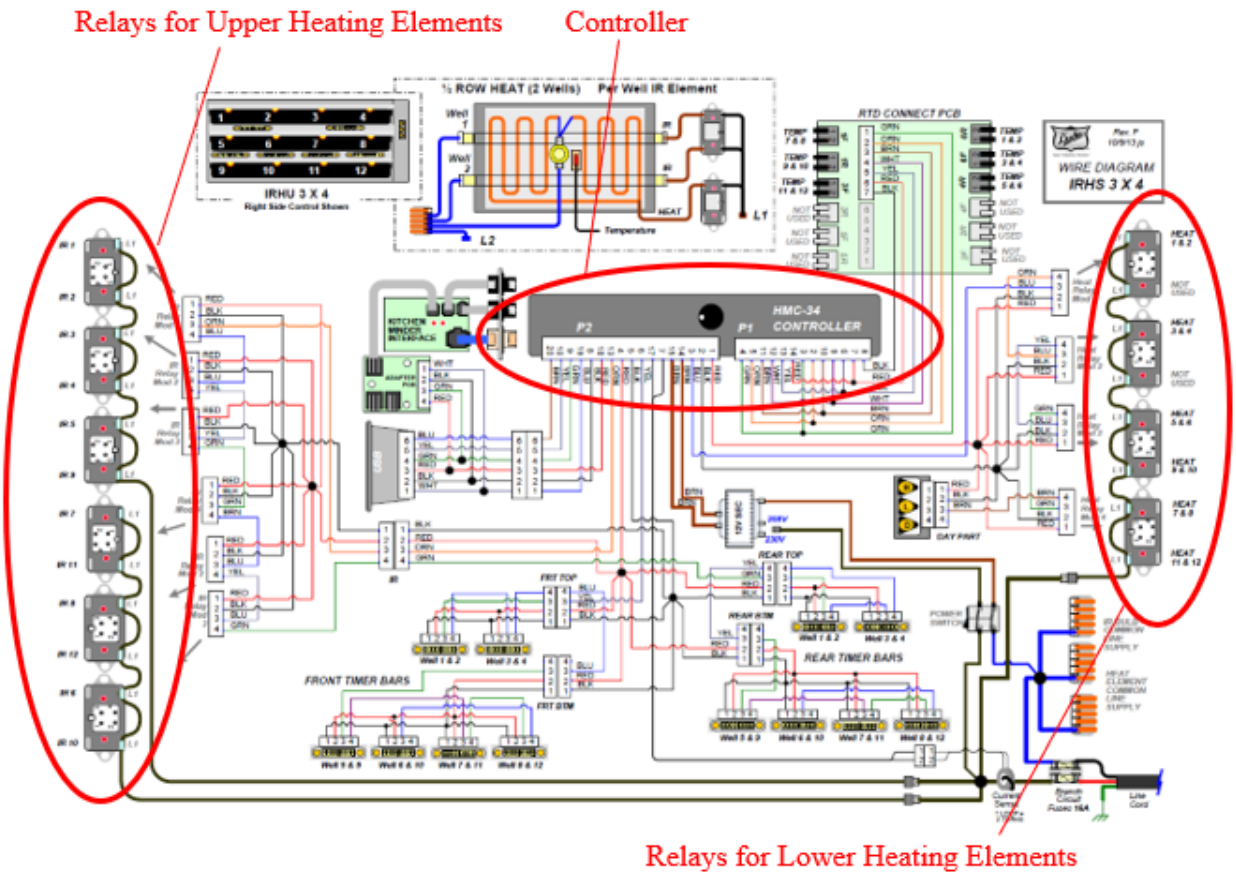
EX1003: ¶181. IRHS24/IRHS34 has "[z]oned bottom heat" ("1/2 ROW HEAT (2 Wells)") for "holding environment customization" and "individually controlled IR emitters" that "pulse on and off for optimum … energy … to the food." EX1006: 1; EX1007: 10, 53; EX1005: 15, 25-26; EX1003: ¶¶182-183. The wiring diagrams show independent control for every element via controller/relay. EX1003: ¶¶184, 191-201.



EX1007: 10.


Relays for Upper Heating Elements
Controller
WIRE DIAGRAM IRHS 2 X 4
IRHU 2 X 4 Right Side Control Shown
½ ROW HEAT (2 Wells)
Per Well IR Element
RTD CONNECT PCB
HMC-34 CONTROLLER
P2
P1
KITCHEN MINDER INTERFACE
ADAPTER PCB
USB
12V SEC
POWER SWITCH
FRONT TIMER BARS
REAR TIMER BARS
DAY PART
HEAT 1 & 2
HEAT 5 & 6
HEAT 3 & 4
HEAT 7 & 8
IR BULB COMMON LINE
HEAT ELEMENT COMMON LINE
Current Sense
Branch Circuit Fuses 12A
Line Cord
Relays for Lower Heating Elements

EX1005: 25.



EX1005: 26.

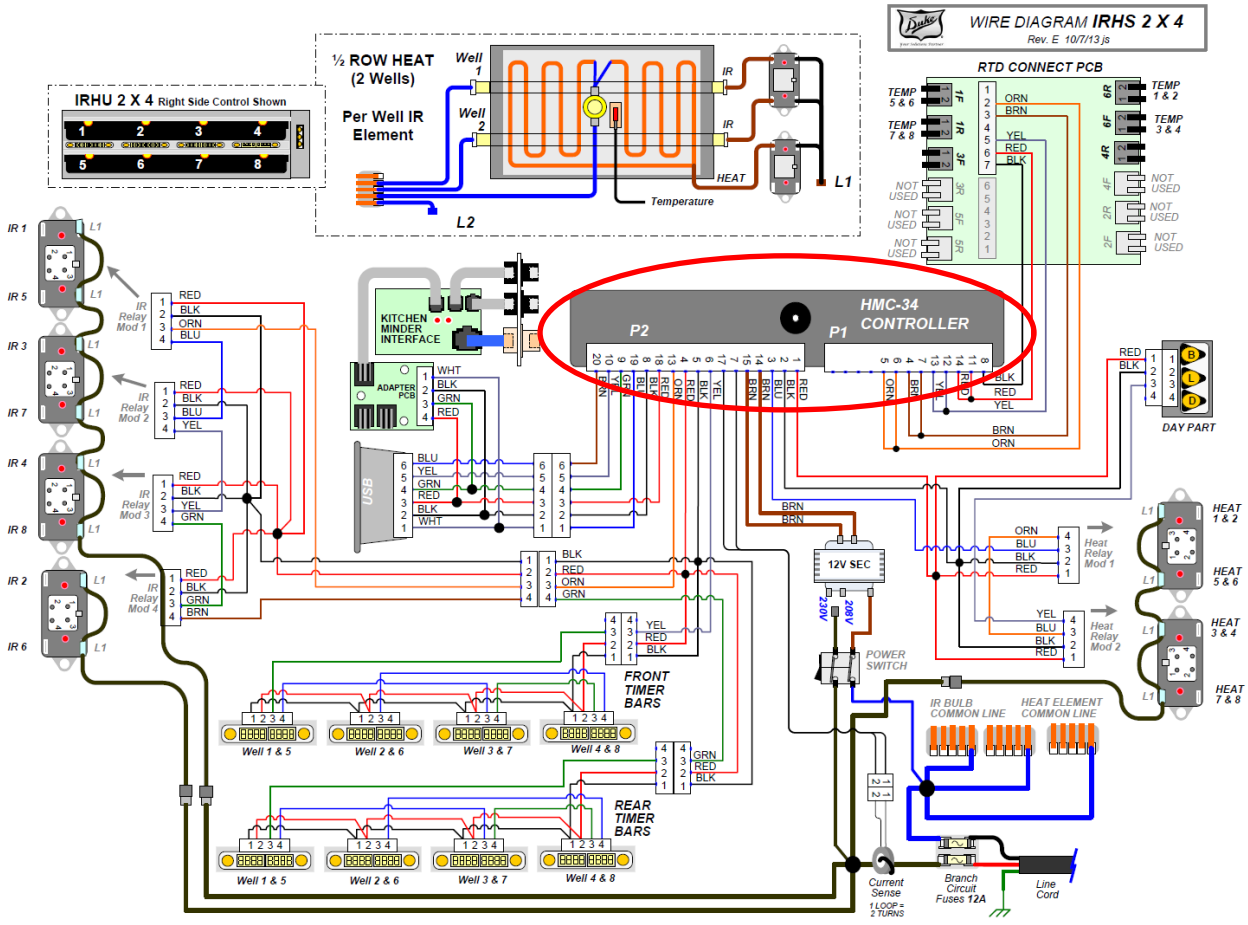
CONTROLLER

The Controller is used to control the Relays and RTD Sensors. It is located inside the control compartment.

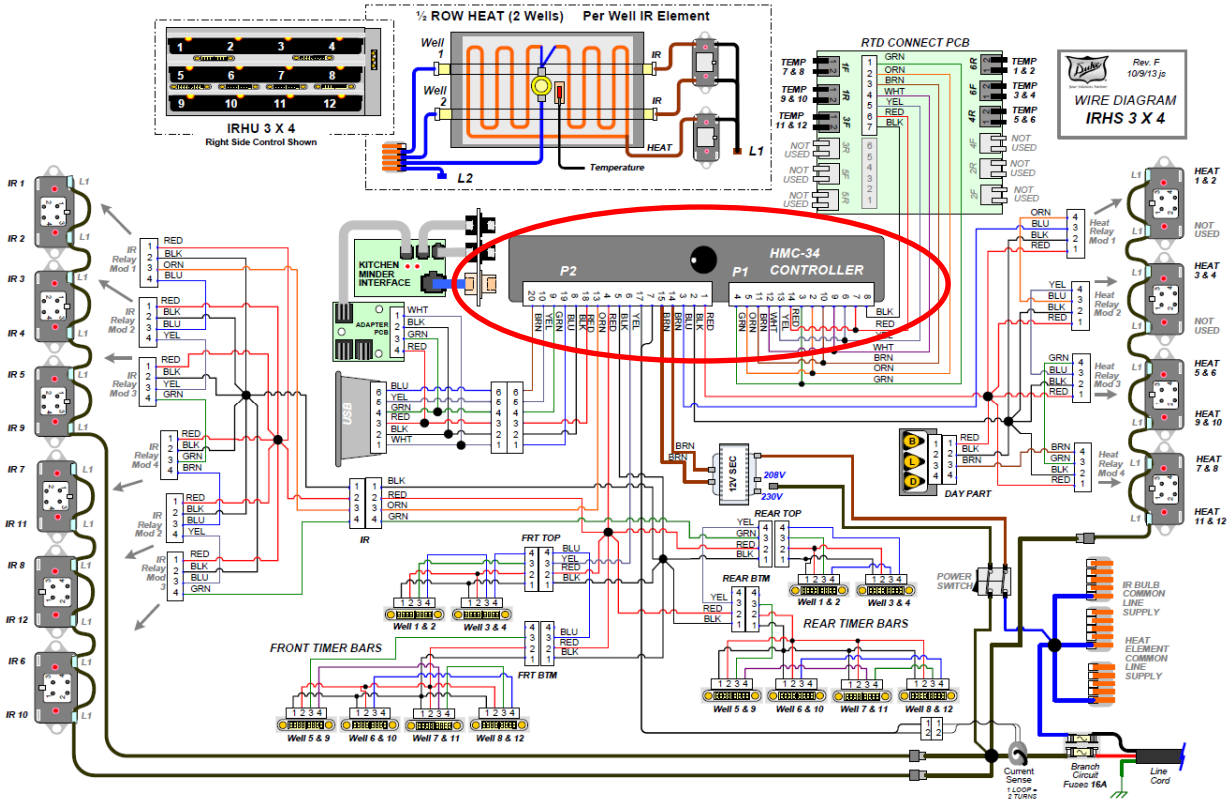
EX1008: 30.

The controller controls each zone to a temperature setpoint for the food type in the zone. EX1006: 1 ("[c]ustom heat settings for food product," "[e]ach compartment individually controlled"); EX1005: 4, 16 ("[t]his new technology allows you to precisely control the environment in each pan, allowing customized

settings for each food product"), 25-26; EX1007: 10, 51 ("each food product has tailored settings to control the thermal path of the food, leading to optimal quality, consistency and extended hold"), 53 ("[t]ailor each well specifically to the products within them"); EX1003: ¶¶202-203. The controller independently operates elements to control each zone's vertical temperature profile. EX1006: 1 ("[d]ual technology heating to reduce temperature variance from top to bottom"); EX1007: 51 ("deliver a consistently hot pan of product, from top to bottom"); EX1005: 16 ("each food product has a tailored HeatSink temperature and InfraRed pulse rate"), 25; EX1003: ¶204-205.



EX1005: 25.



EX1005: 26.

Each zone is operated to independent temperature setpoint via heatsink sensor feedback and food type/temperature setting. EX1005: 16, 25; EX1006: 1; EX1007: 53; EX1003: ¶¶207-208.



This indicates the Heat Sink Temperature for BURG.

EX1005: 17.

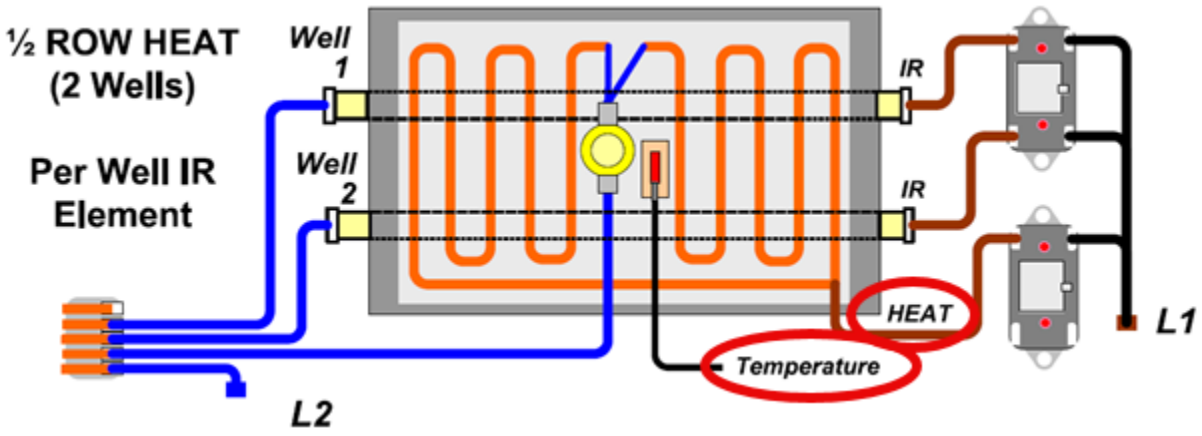
SENS – SENSOR FAULT

- May indicate the unit has been programmed improperly (i.e. loading a 2x4 product configuration file into a 2x2 unit). An attempt to properly reprogram the unit should be made.
- May indicate a fault with a heat sink temperature sensor. The affected pan location is not available for timing product and a qualified service technician should be contacted to identify the cause of the fault

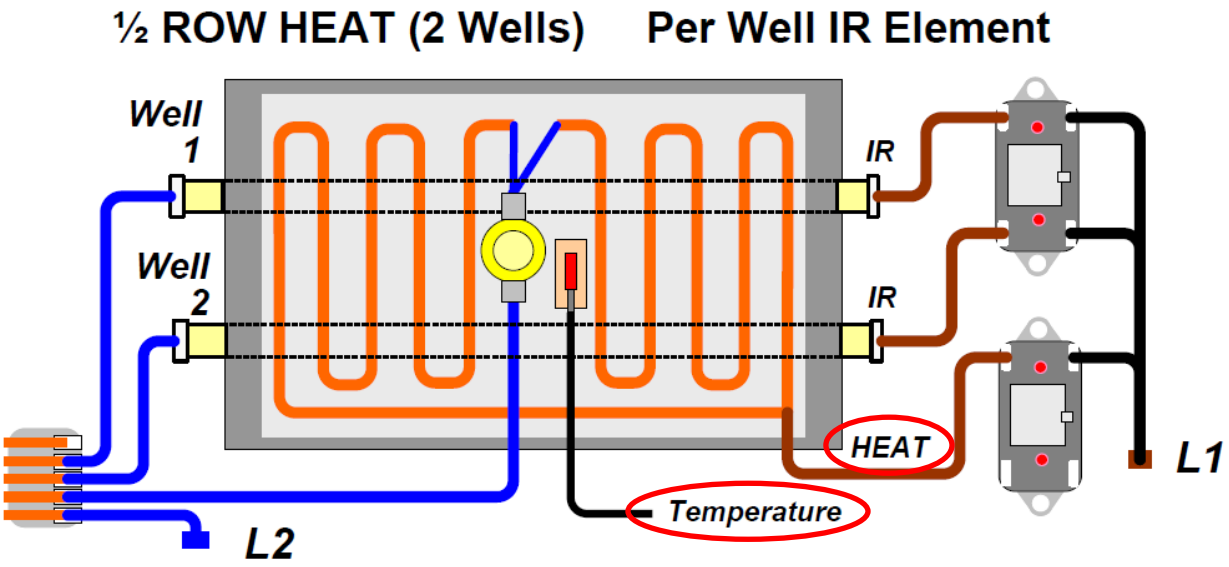
TEMPERATURE CHECK PROCEDURE

1. A digital temperature meter that has been calibrated must be used to get an accurate temperature reading. Use a thermocouple surface temperature probe to measure temperatures.
2. **No pans should be in wells during the pre-heat and temperature check.** Pre-heat the warmer for 30 minutes before taking any temperature readings. Do not take readings unless the cavity has been empty for 30 minutes. This will allow the temperature to stabilize and will prevent false readings.
3. The warmer cavity should be cleaned and empty before the temperature is checked. Avoid any air drafts that might flow through the cavity.
4. Locate the surface temperature probe on the bottom of the first cavity as shown for the cabinet size.
5. All temperature controls exhibit a swing in temperature as the control cycles on and off while regulating to the set point. The correct calibration temperature is the average of several readings taken over a period of 20 minutes after the warmer has been pre-heated. The average temperature should be ± 5°F from the set point.

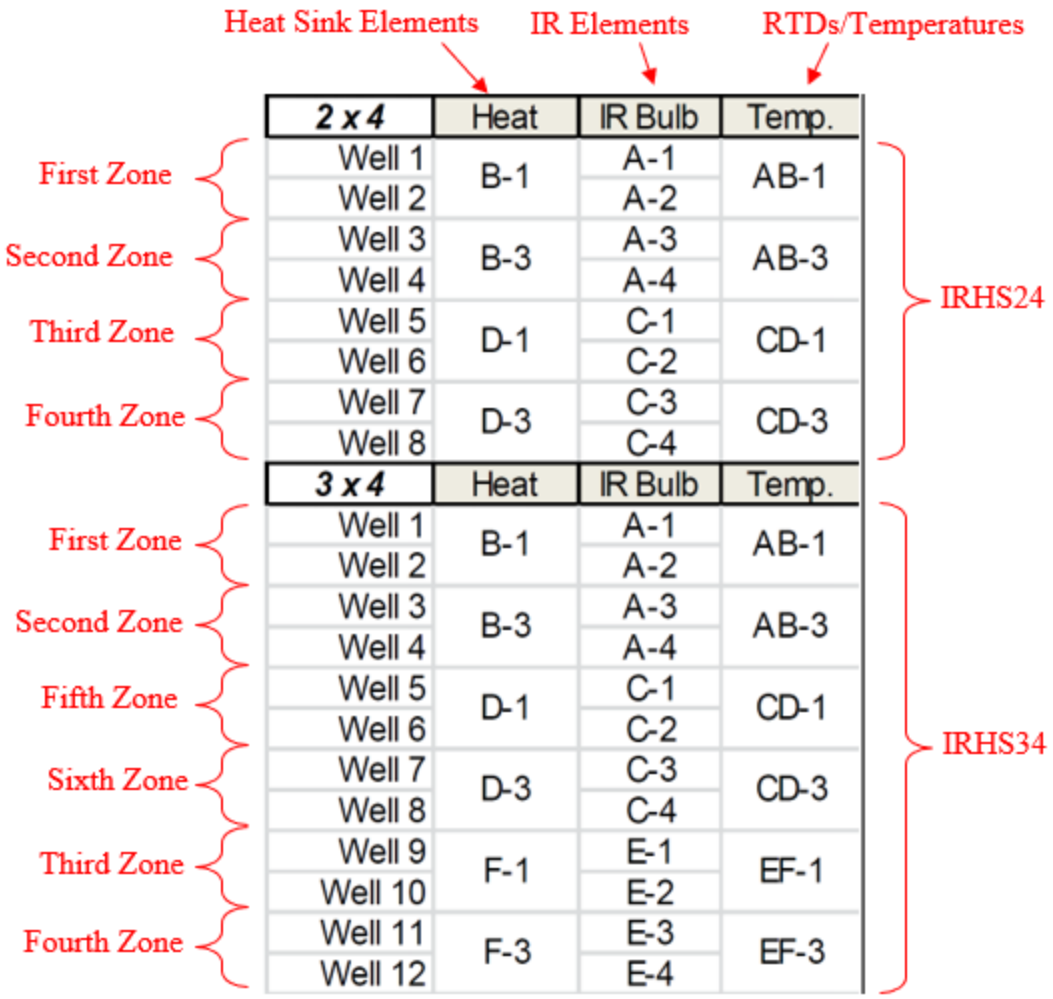
EX1005: 15.



EX1005: 25.



EX1005: 26.



EX1008: 64.

IRHS Documents teach food type customized heating and zones having different food types. EX1006: 1; EX1005: 4, 16; EX1007: 51, 53 ("[t]otal well independence allows freedom in product placement in the IRHS" and "[t]ailor each well specifically to the products within them"); EX1003: ¶209.



EX1007: 12.

Given the diverse menu, food location flexibility, and teachings to customize food type temperature, it would have been obvious to hold different food types in different zones (first food type (e.g., burger patties) in first zone; second food type (e.g., broiled chicken (tendergrill)) in second zone; third food type (e.g., fish) in third zone; and fourth food type (e.g., rib patties) in fourth zone) and therefore use different temperature setpoints in different zones. EX1007: 12; EX1005: 16; EX1006: 1; EX1007: 9, 53; EX1003: ¶¶210, 220, 230, 240.

It would have been obvious to operate each zone (first/second/third/fourth zone) to an independent temperature setpoint (first/second/third/fourth setpoint, e.g., heatsink setpoint)—based on the zone's tailored food type temperature settings—by independently operating the zone's upper elements (first/third/fifth/seventh) and independently operating the zone's lower element

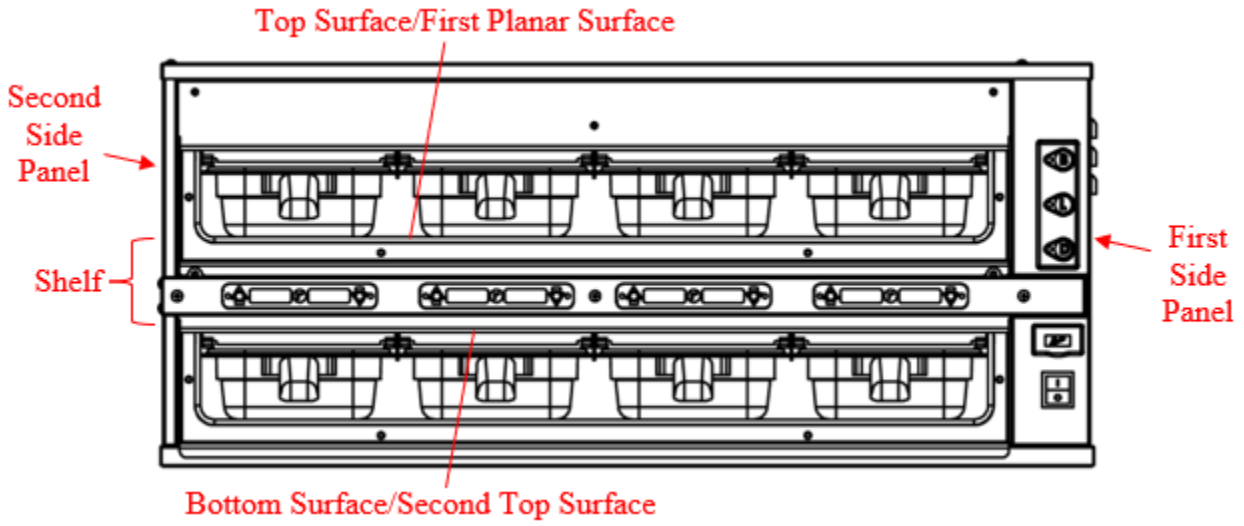
(second/fourth/sixth/eighth) to hold more/different food types to meet customer demands, with reasonable expectation of success (enabled by IRHS configuration/controls, demonstrated by IRHS and other references). EX1005: 16; EX1008: 16, 21; EX1028: 30, 14, 39; EX1019: 1:17-45, 4:36-59; EX1010: ¶[0024]; EX1020: ¶¶[0021]-[0023]; EX1012: ¶¶[0069], [0072], [0096]; EX1003: ¶¶211, 221, 231, 241.

1.f

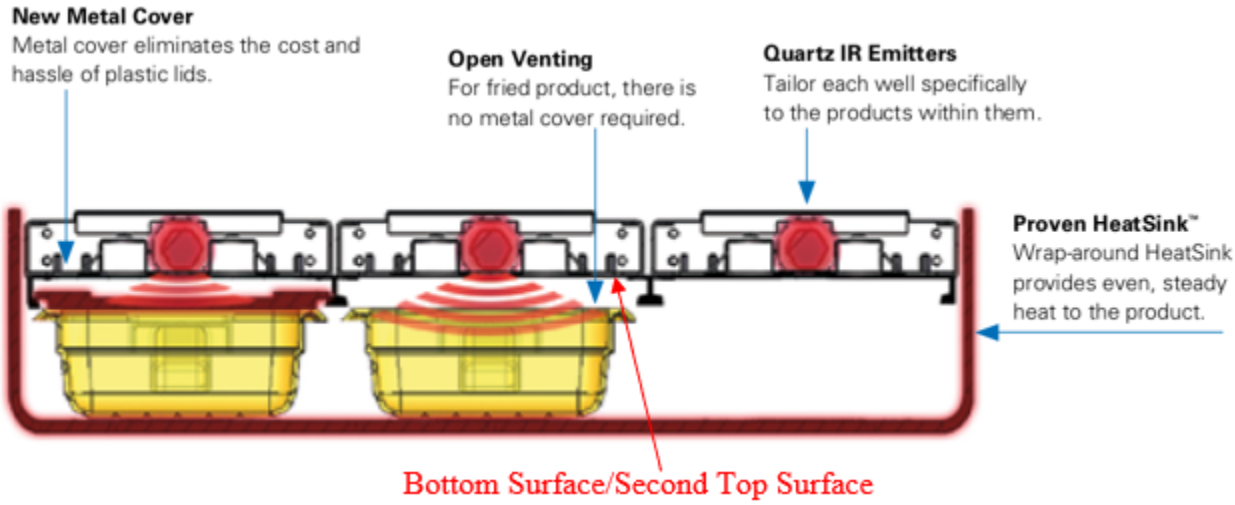
Per Section IV(B)(1.b/1.c/1.d/1.e), IRHS24/IRHS34's controller operates different zones independently to independent temperatures (first-fourth) based on the zones' different food type temperature settings (e.g., burger patty, broiled chicken (tendergrill), fish, rib patties). EX1005: 4, 16, 25-26; EX1006: 1; EX1007: 51, 53; EX1003: ¶¶242-244. Moreover, it would have been obvious to heat the zones to different/independent temperatures per Section IV(B)(1.b/1.c/1.d/1.e) to hold more/different food types to meet customer demands, with reasonable expectation of success (IRHS Documents' teachings; known operation). EX1028: 30, 14, 39; EX1019: 1:17-45, 4:36-59; EX1010: ¶[0024]; EX1020: ¶¶[0021]-[0023]; EX1012: ¶¶[0069], [0072], [0096]; EX1003: ¶¶245-247.

C. Claim 2

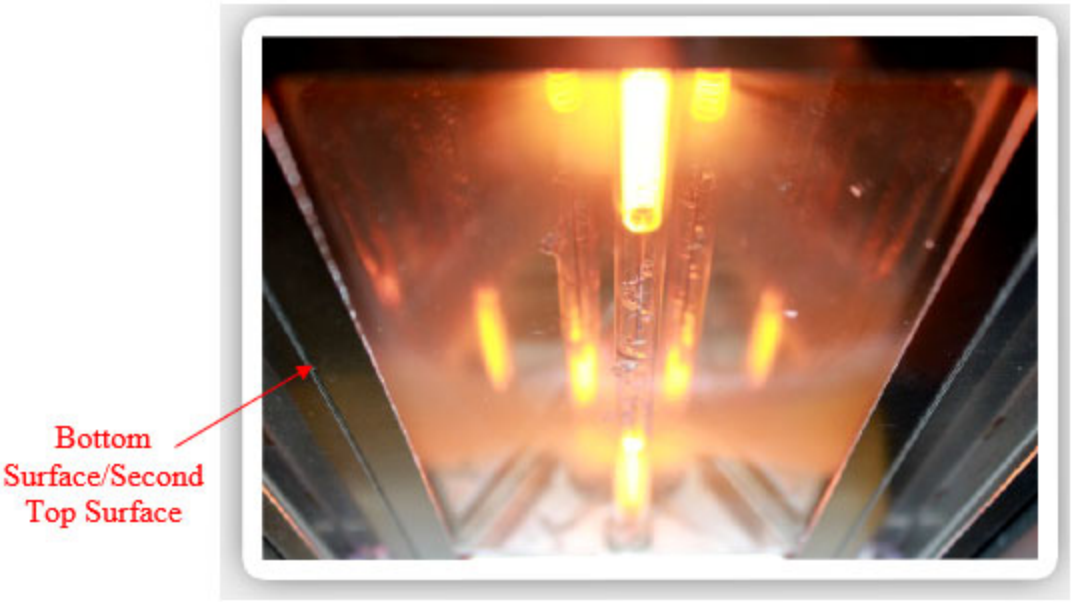
The shelf between the side panels has a top surface (first planar surface) and bottom surface (second top surface). EX1003: ¶¶248-250.



EX1005: 8.



EX1007: 53.

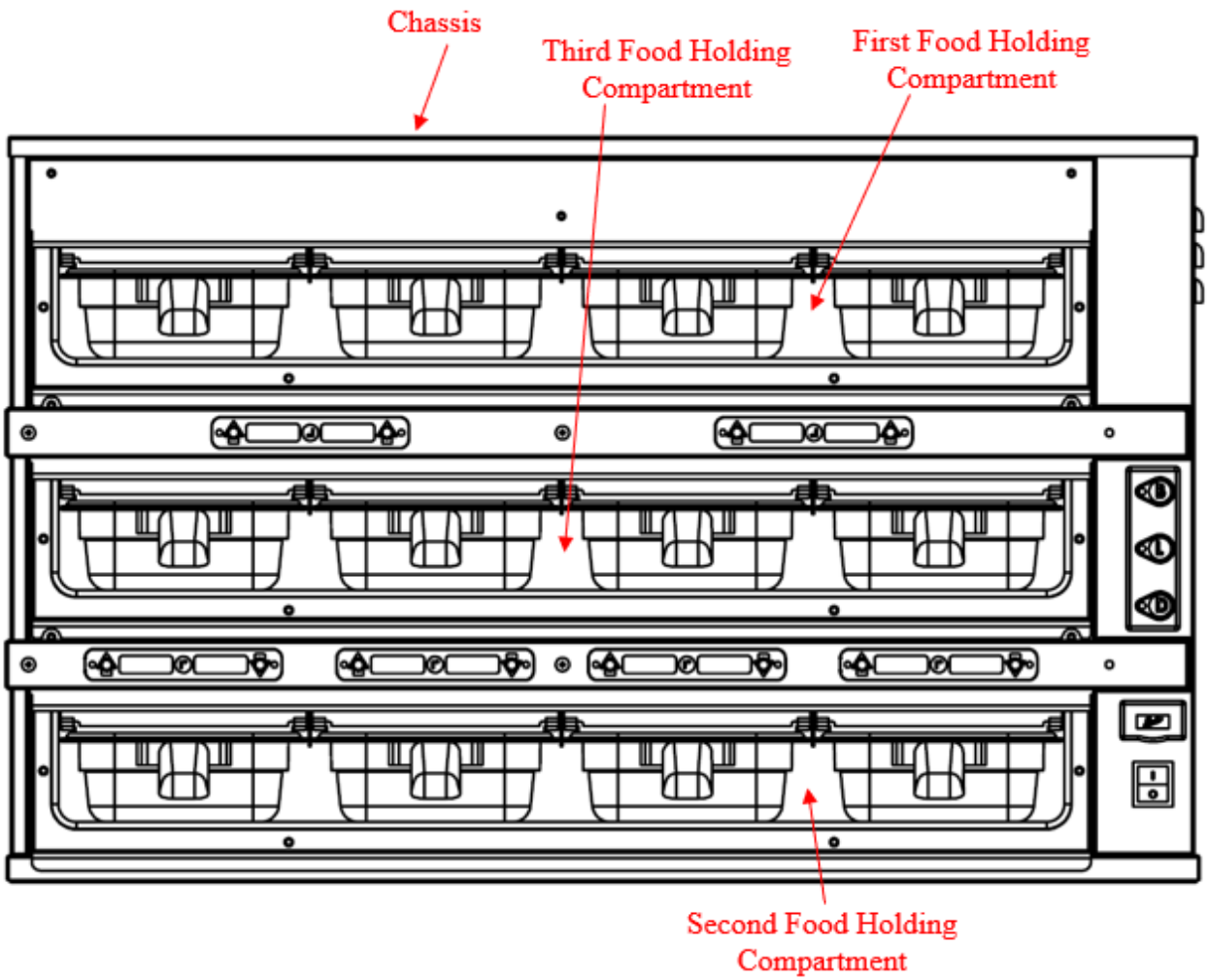


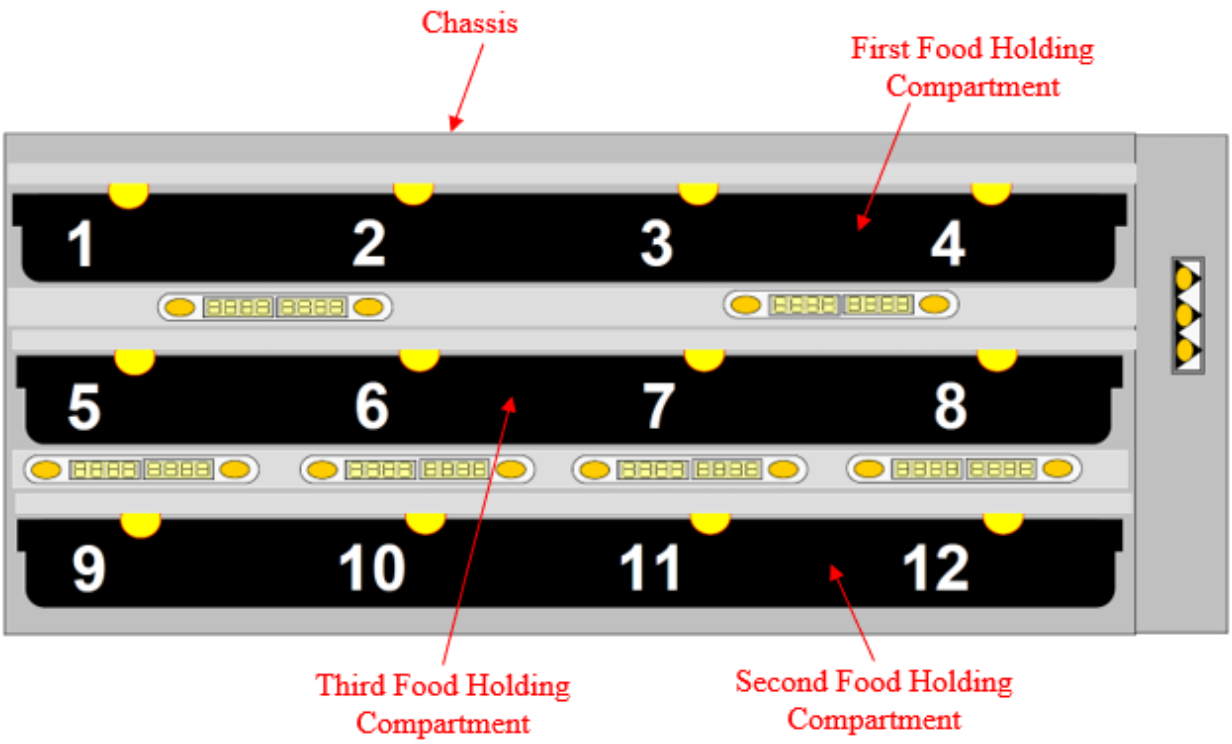
EX1007: 11.

D. Claim 3

3.a.1

IRHS34's third compartment is within the chassis between first and second compartments. EX1003: ¶¶251-252.

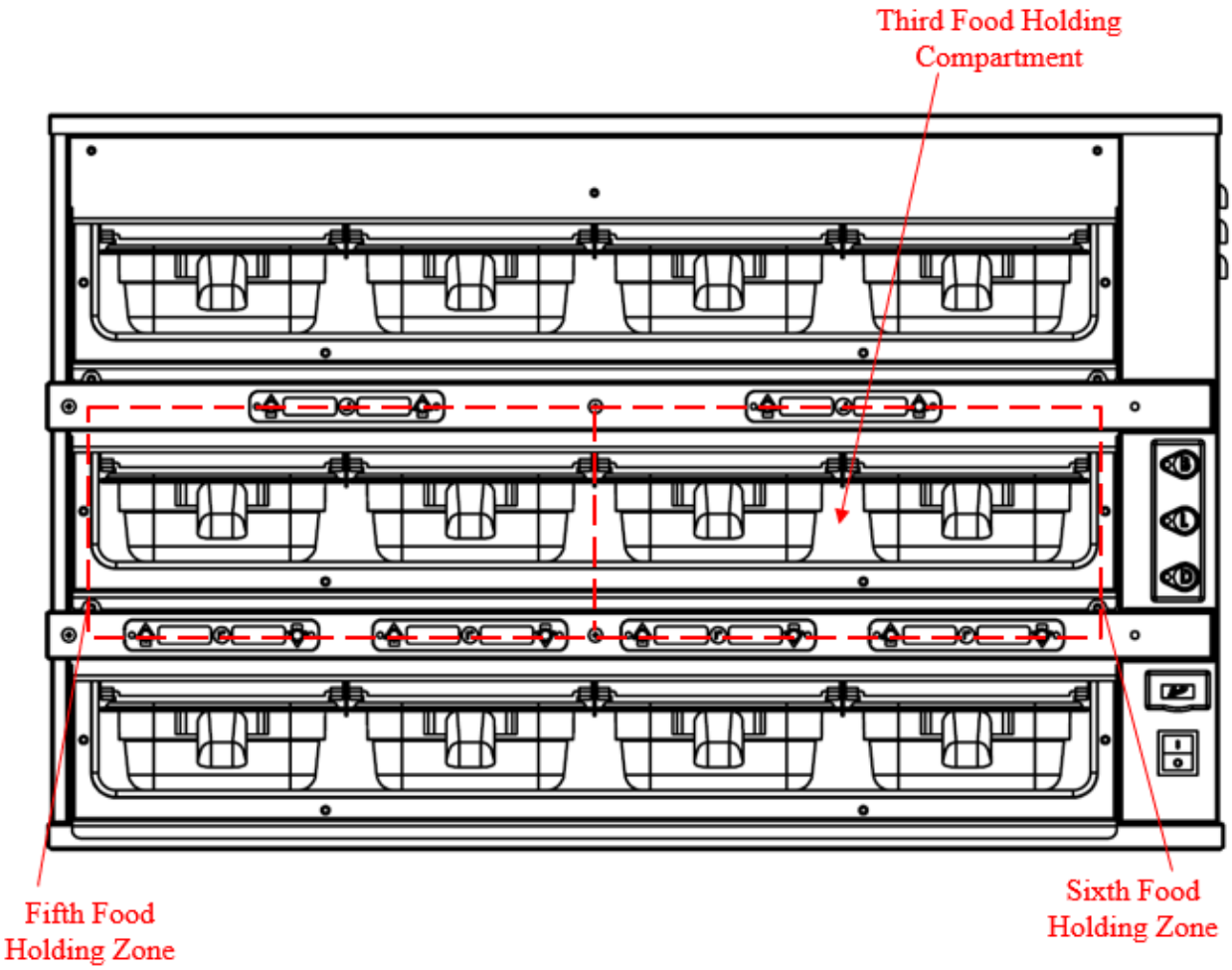

Chassis
Third Food Holding Compartment
First Food Holding Compartment
Second Food Holding Compartment

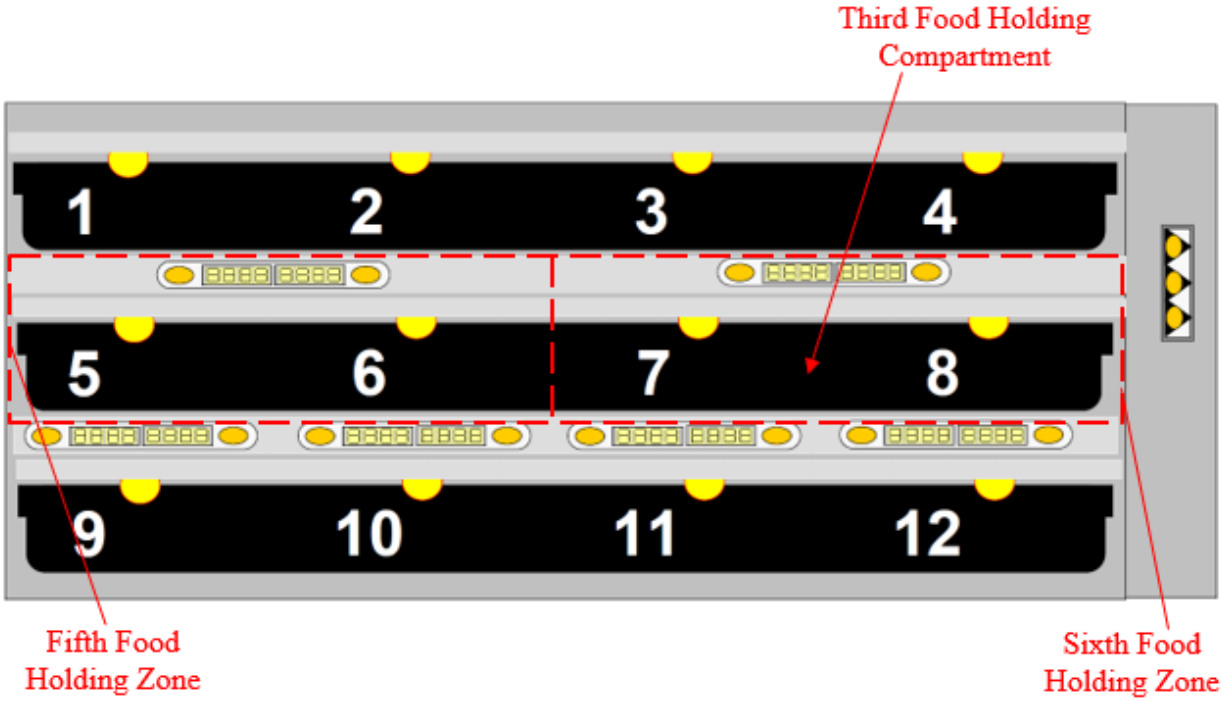


EX1005: 9, 26.

3.a.2

The third compartment includes fifth and sixth zones. EX1003: ¶253.

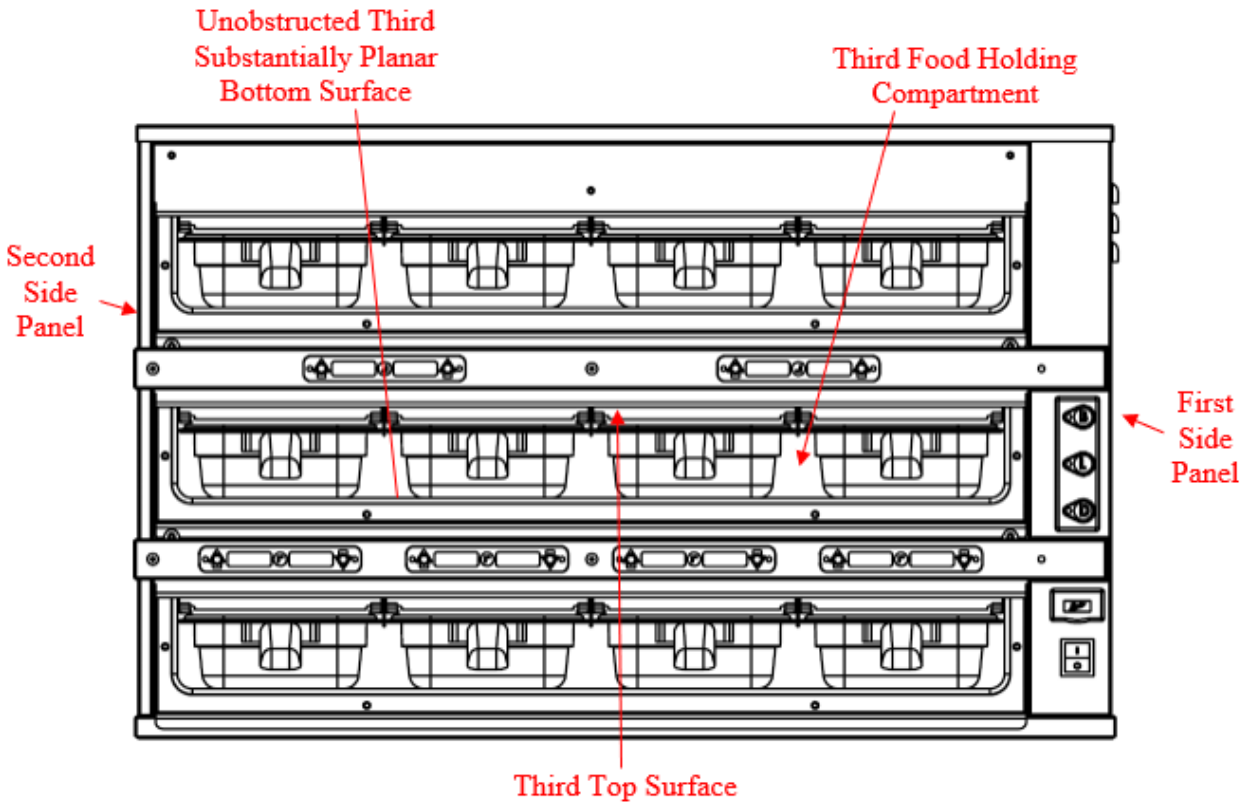

Third Food Holding Compartment
Fifth Food Holding Zone
Sixth Food Holding Zone

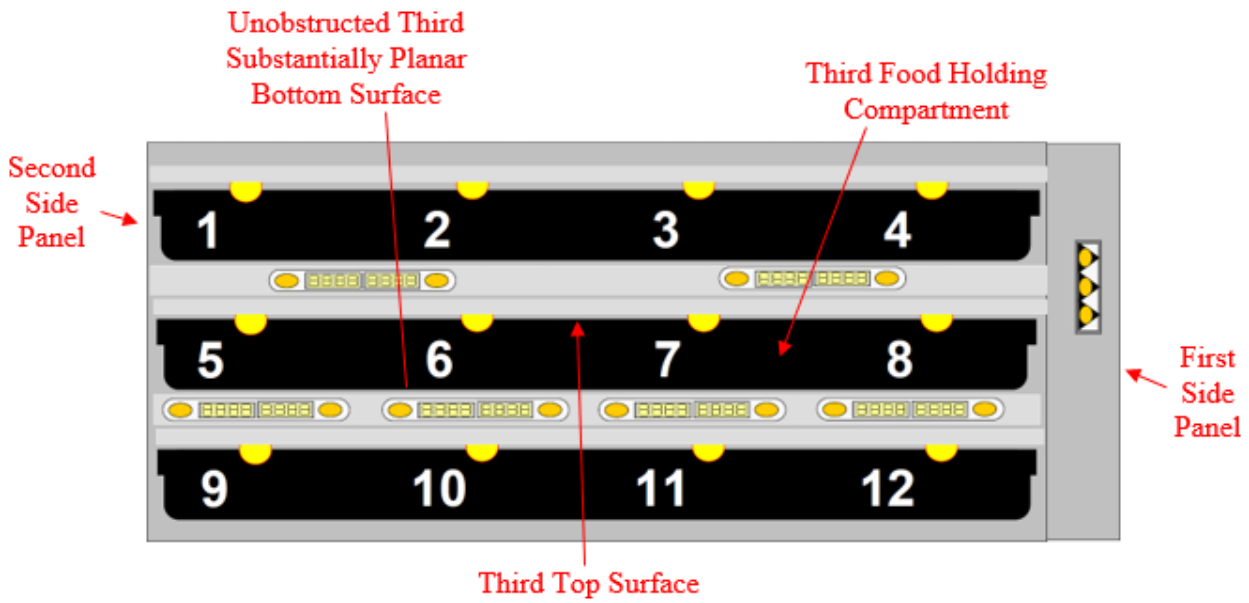

Third Food Holding Compartment
1
2
3
4
5
6
7
8
9
10
11
12
Fifth Food Holding Zone
Sixth Food Holding Zone

EX1005: 9, 26.

3.a.3

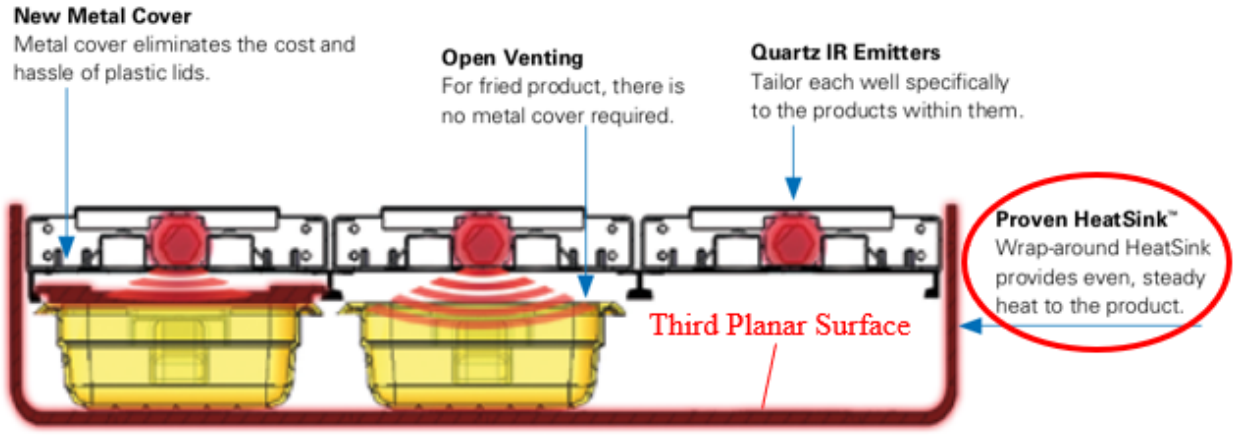
The first and second side panels, third top surface, and third planar bottom surface (substantially unobstructed between side panels) define the third compartment. EX1003: ¶¶254-255.





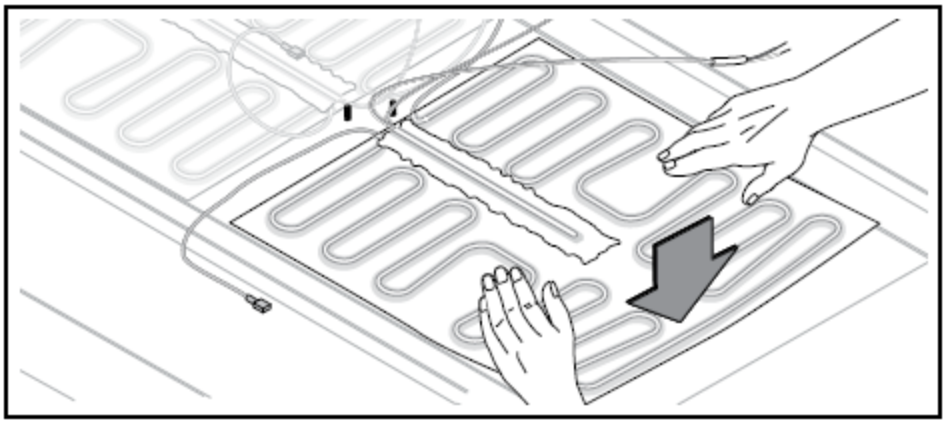
EX1005: 9, 26.

The third planar surface (HeatSink surface) is thermally conductive aluminum. EX1006: 1; EX1007: 51; EX1005: 16; EX1003: ¶¶256-257.



EX1007: 53.

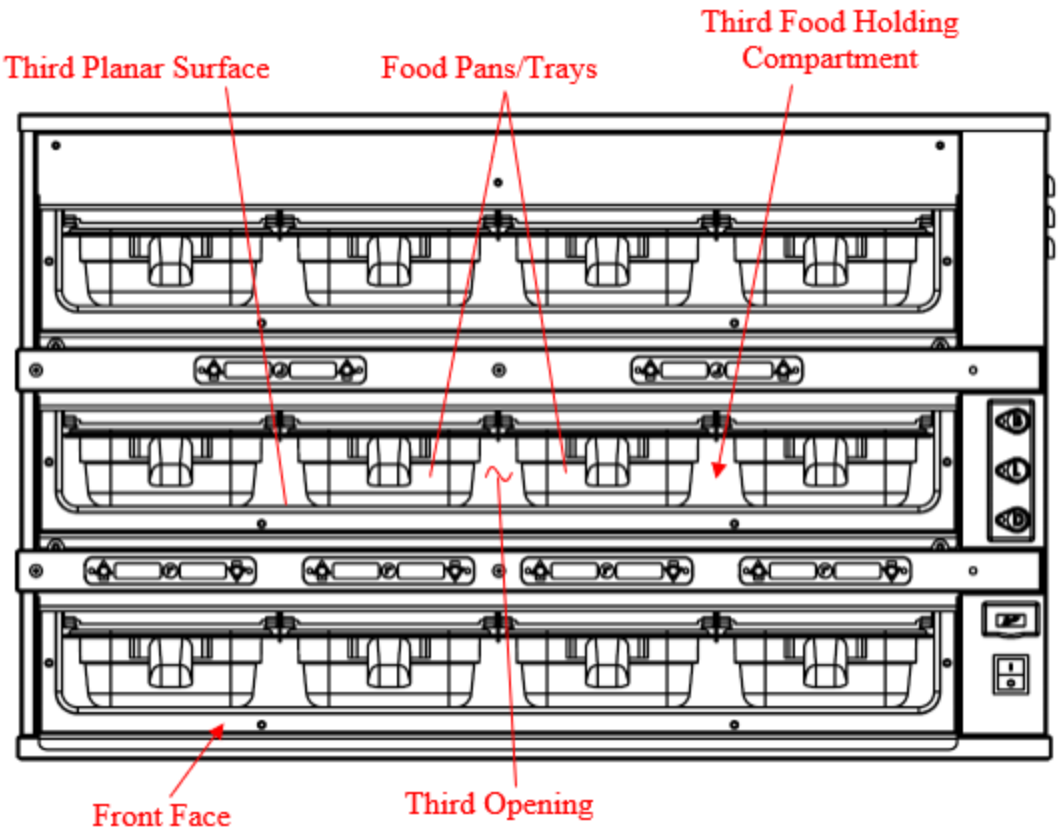
14. Peel the adhesive tape cover off the replacement Heat Element and press in place on the heat sink, ensuring all air bubbles are smoothed out.



EX1008: 23.

3.a.4

A third opening through the front face allows pan/tray passage into the third compartment onto the third planar surface. EX1003: ¶¶258-260.

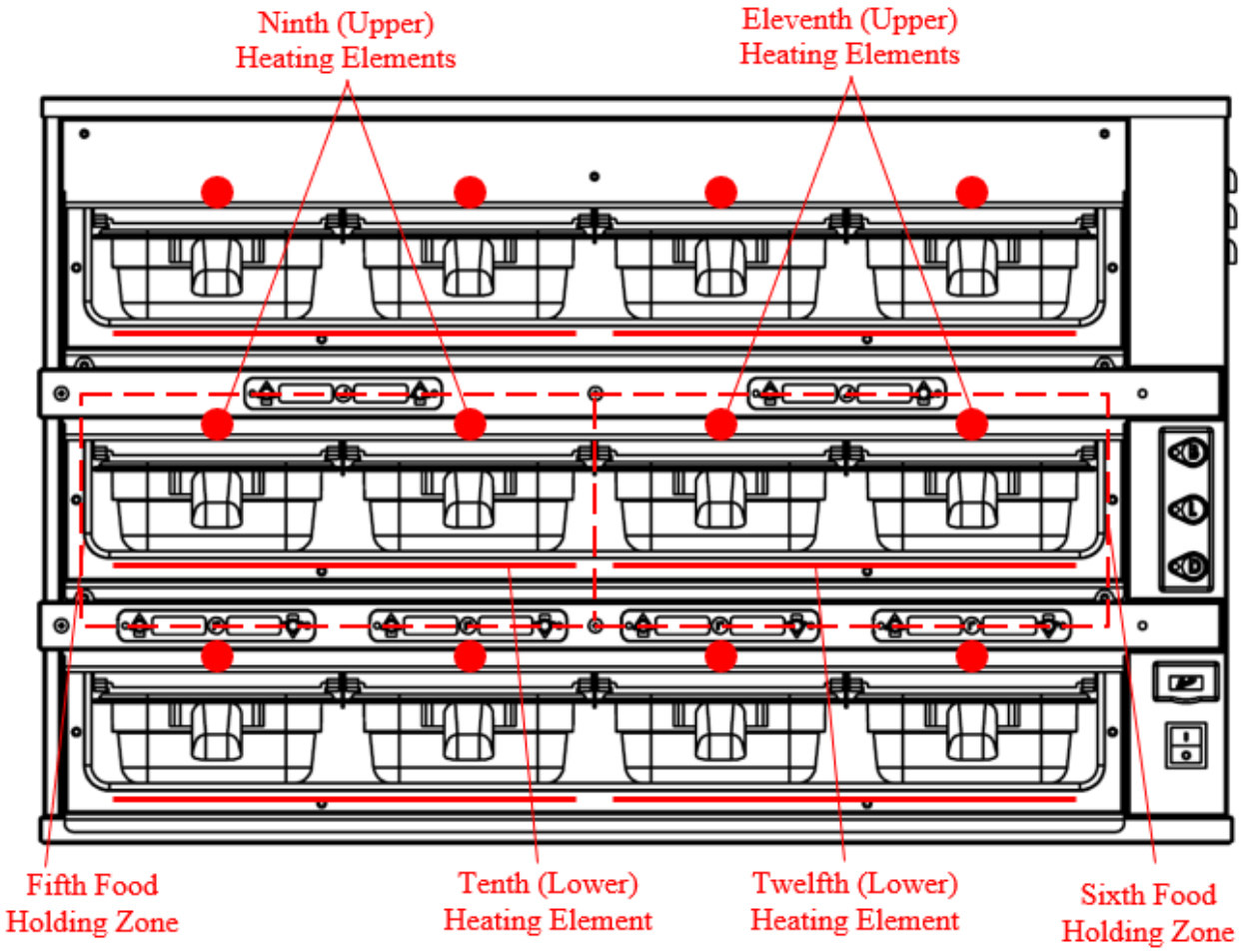


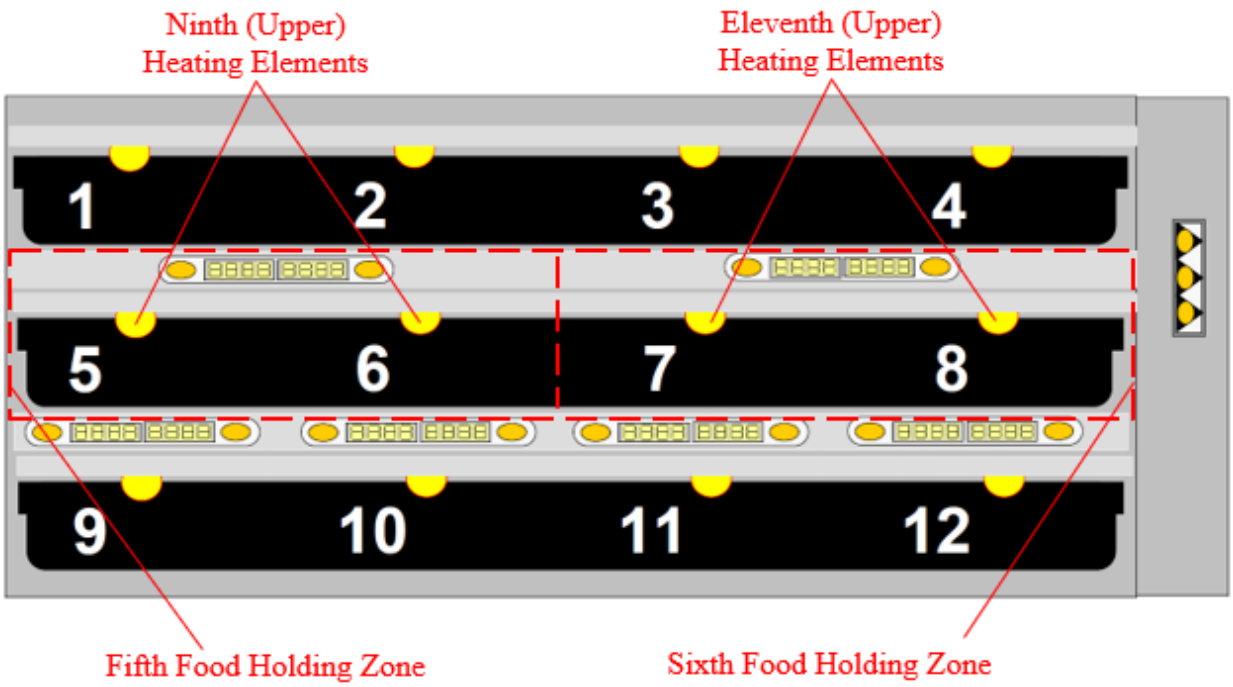
EX1005: 9.

3.b/3.c

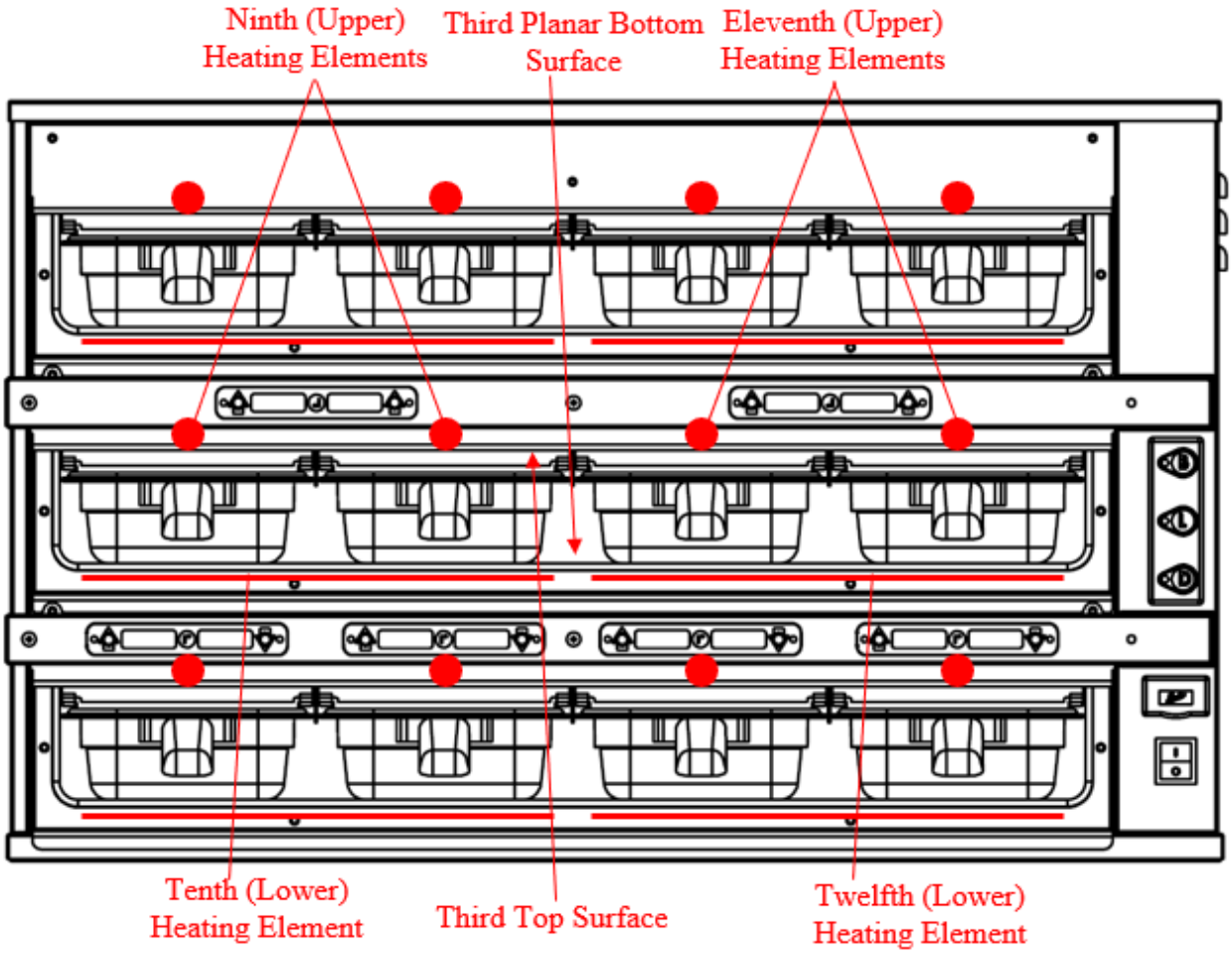
This third compartment, its zones, and elements are similar to the compartments/zones/elements addressed above, and for similar reasons per Sections IV(B)(1.a.3/1.a.6/1.a.7), IV(B)(1.b/1.c/1.d/1.e): 1) IRHS34's fifth and sixth zones have ninth and tenth elements and eleventh and twelfth elements, respectively; 2) the ninth and eleventh elements are thermally coupled to the third top surface; and 3) the tenth and twelfth elements are thermally coupled to the third planar surface (thermally conductive aluminum). EX1006: 1; EX1007: 51, 53;

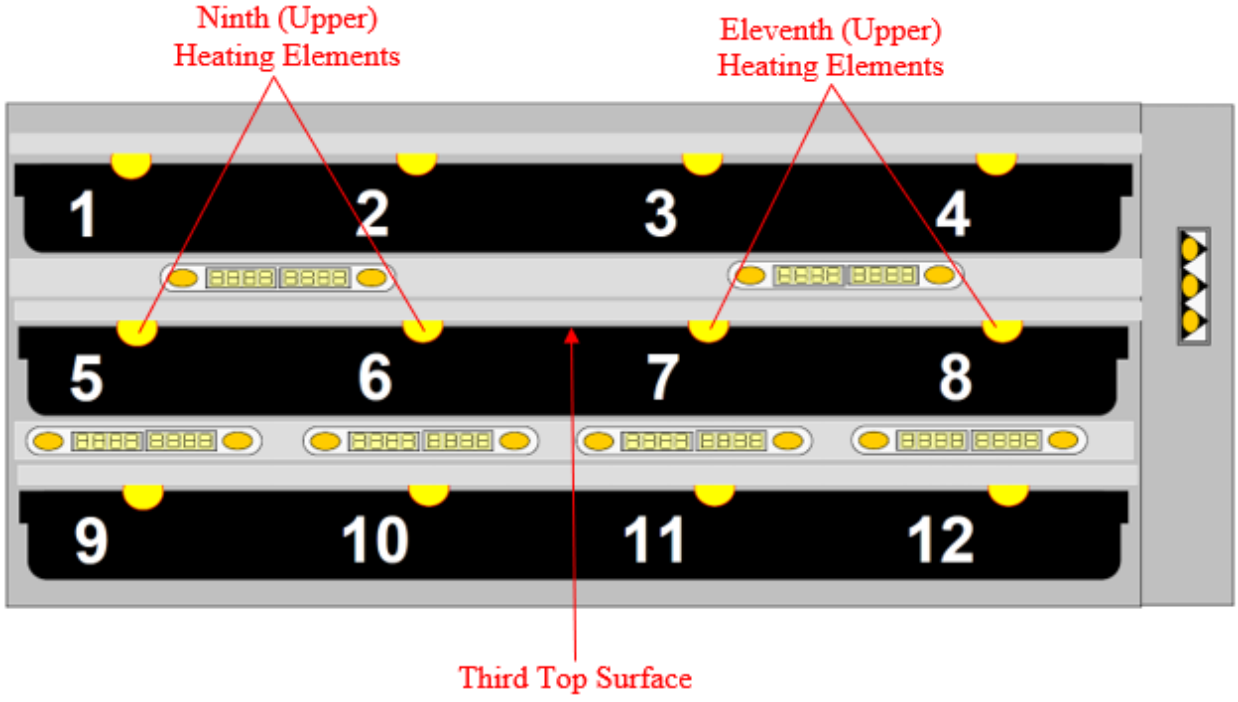
EX1005: 16; EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1003: ¶¶261-268, 271-278.



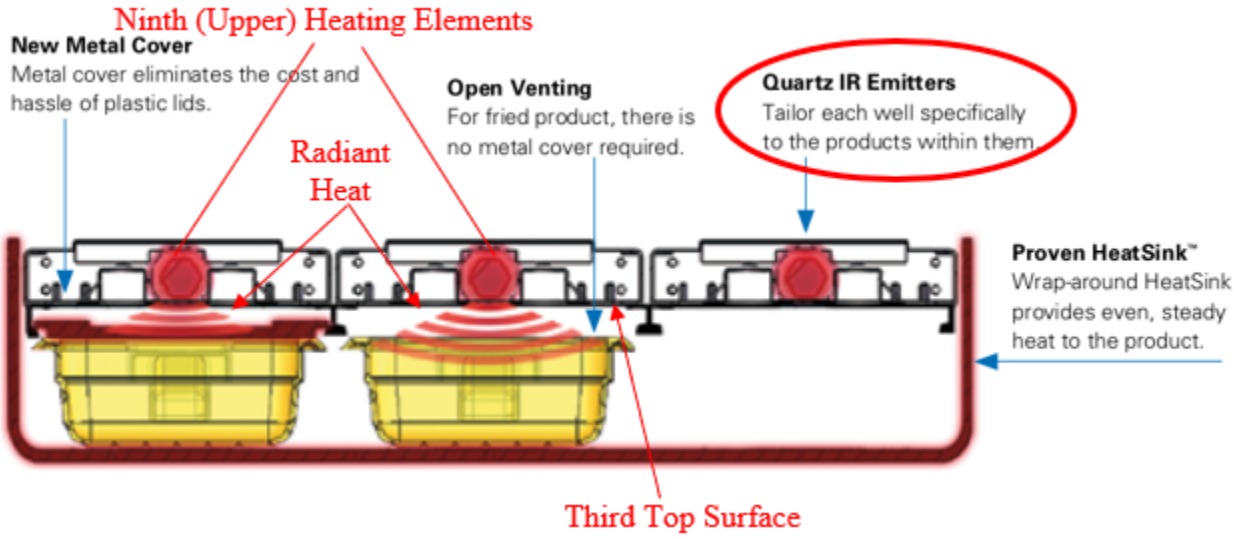

Ninth (Upper)
Heating Elements
Eleventh (Upper)
Heating Elements
1
2
3
4
5
6
7
8
9
10
11
12
Fifth Food Holding Zone
Sixth Food Holding Zone

EX1005: 9, 26.

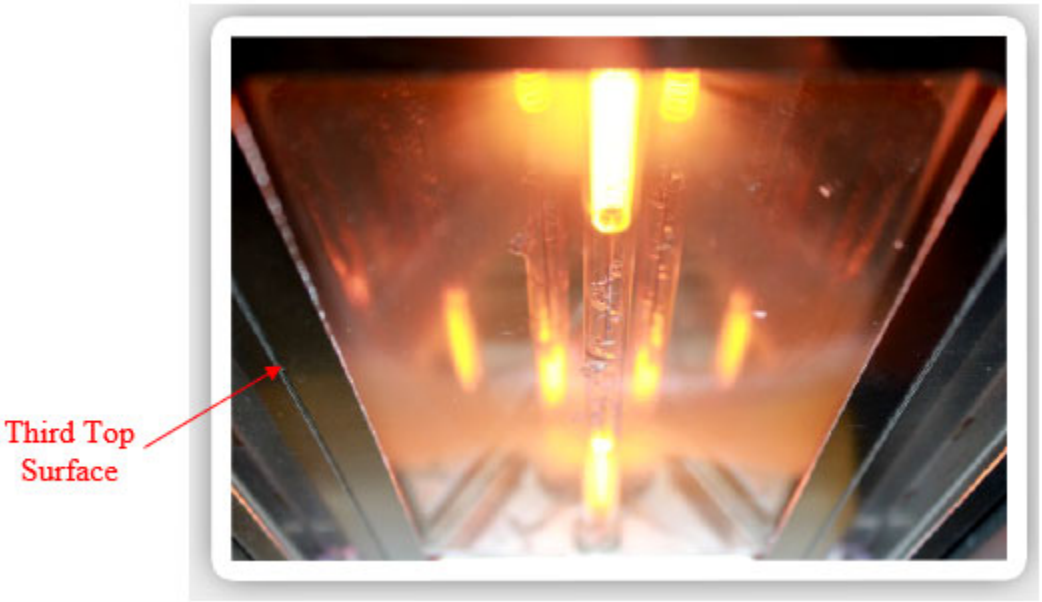

Ninth (Upper)
Heating Elements
Third Planar Bottom
Surface
Eleventh (Upper)
Heating Elements
Tenth (Lower)
Heating Element
Third Top Surface
Twelfth (Lower)
Heating Element


Ninth (Upper)
Heating Elements
Eleventh (Upper)
Heating Elements
1
2
3
4
5
6
7
8
9
10
11
12
Third Top Surface

EX1005: 9, 26.

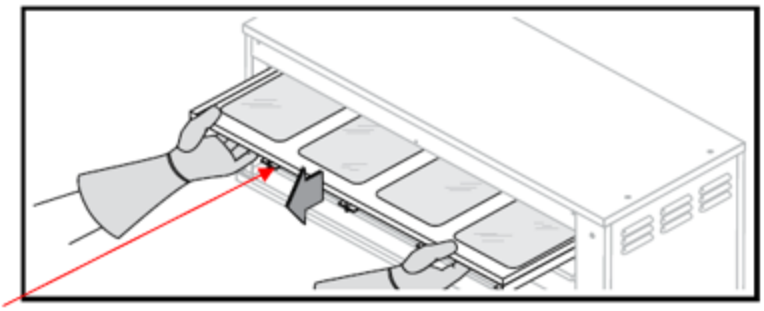


EX1007: 53.

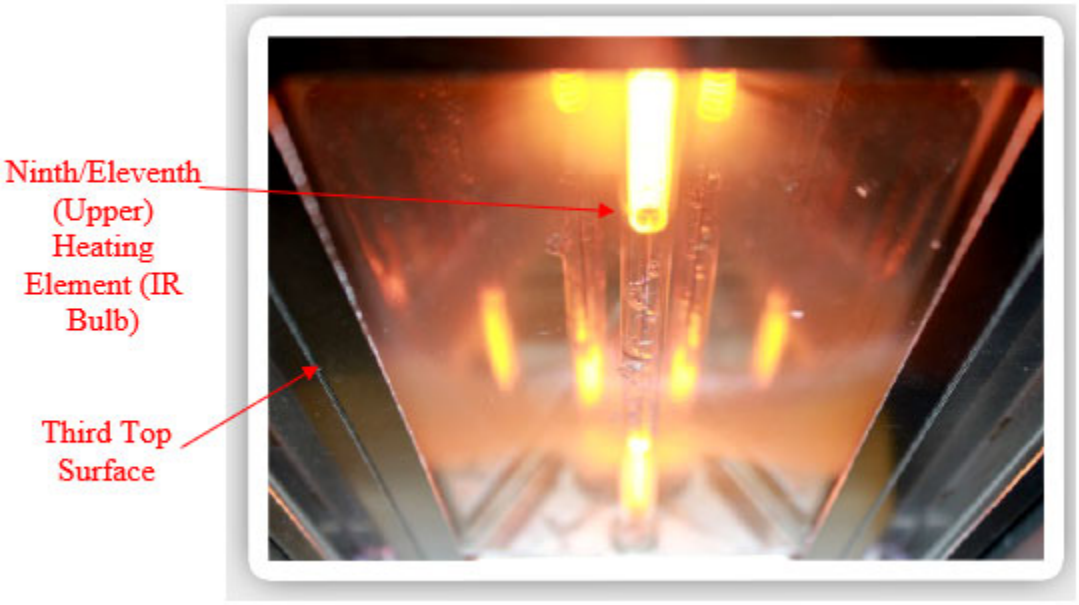


EX1007: 11.

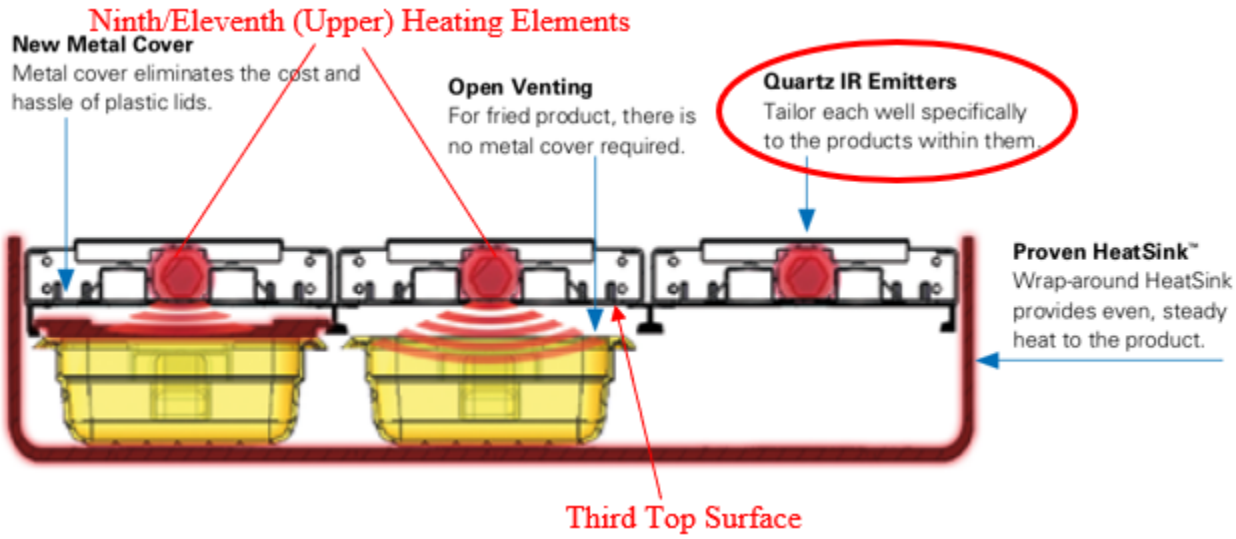
NOTE: Make sure the glass has cooled off sufficiently to avoid burns to bare skin. Use gloves if necessary.



EX1008: 25.



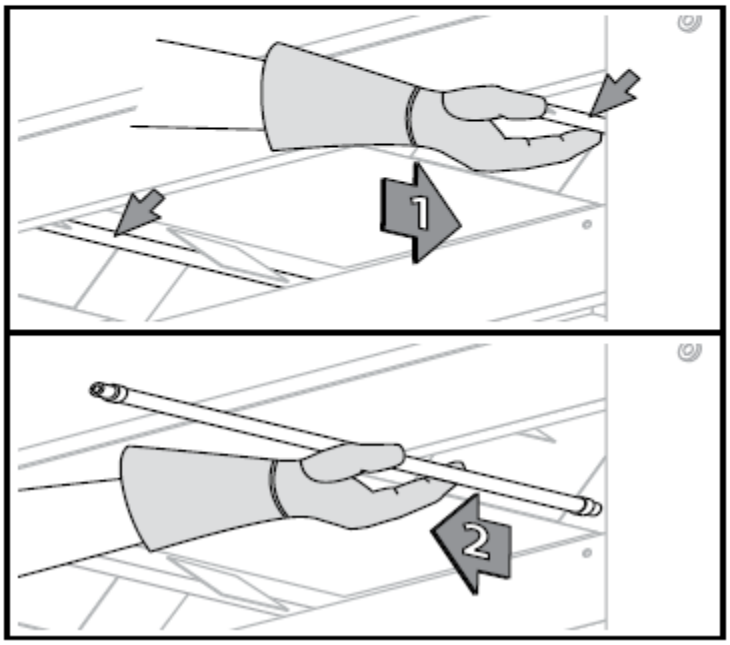
EX1007: 11.



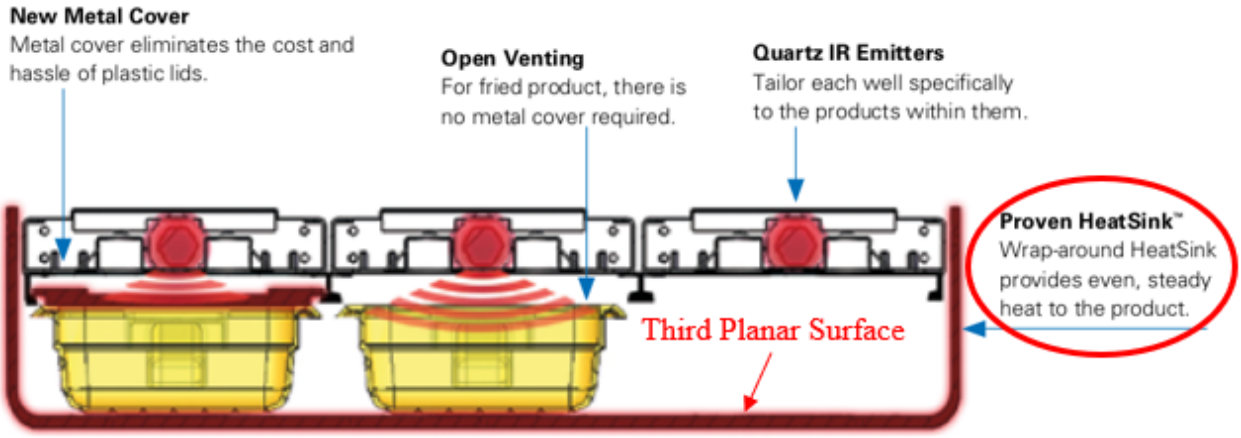
EX1007: 53.

6. The Emitter Sockets are spring-loaded. Push the Emitter towards the rear socket until the Emitter is free from the front socket and carefully remove.

NOTE: DO NOT TOUCH THE EMITTER WITH BARE HANDS! The oil on human skin will shorten the life of the Emitters. If the Emitter is to be reused, use clean gloves, a clean cloth, or a clean paper towel to handle.



EX1008: 27.



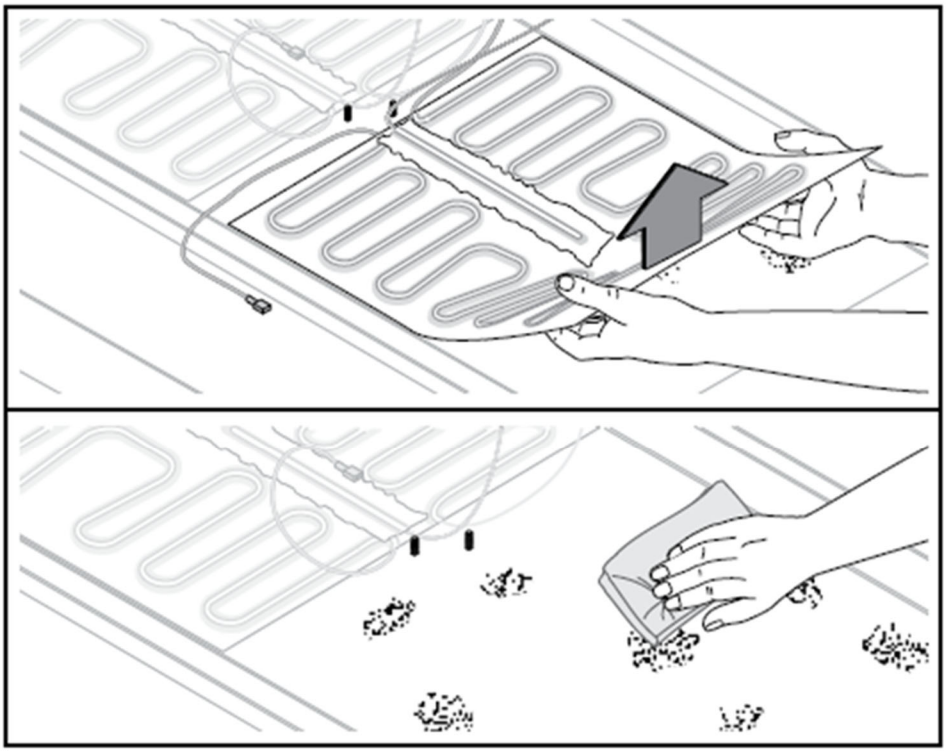
EX1007: 53.

HEAT ELEMENTS

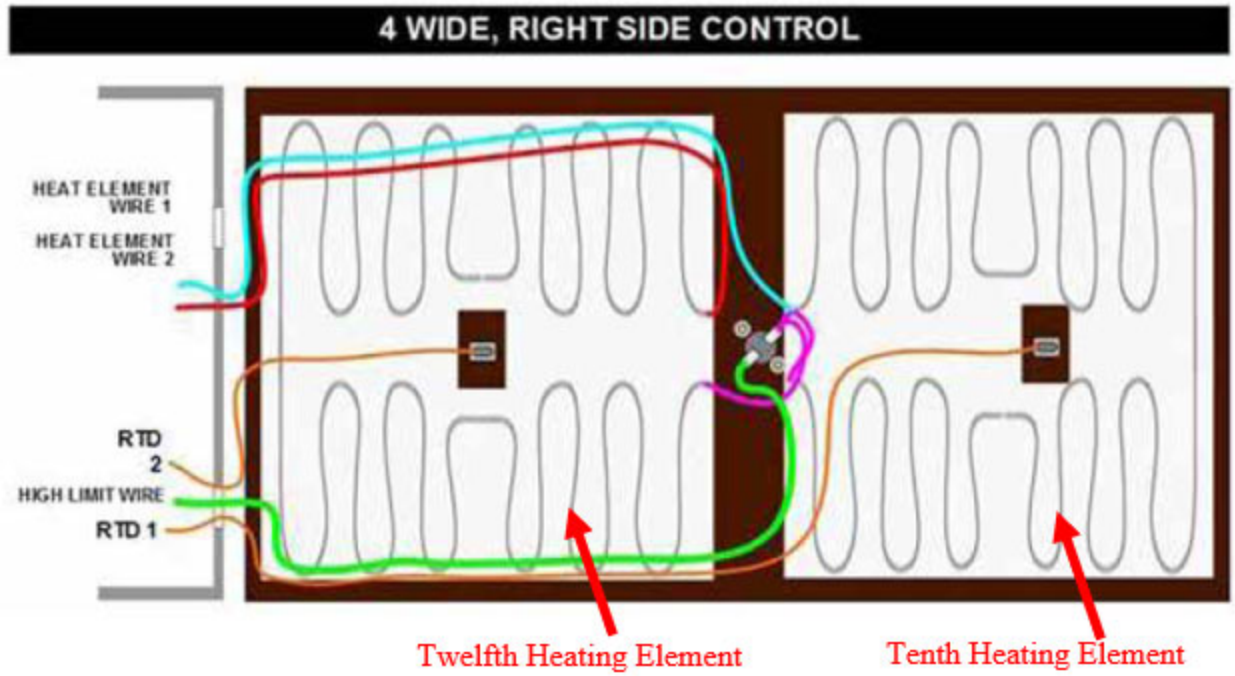
The Heat Elements provide the heating required to keep the heating wells at proper operating temperatures. The quantity varies depending on model and are affixed to the bottom of each Heat Sink.

EX1008: 21.

13. Remove the affected Heat Element by peeling off from the heat sink. Ensure any excess tape and/or adhesive is removed.



EX1008: 22.



EX1008: 58.

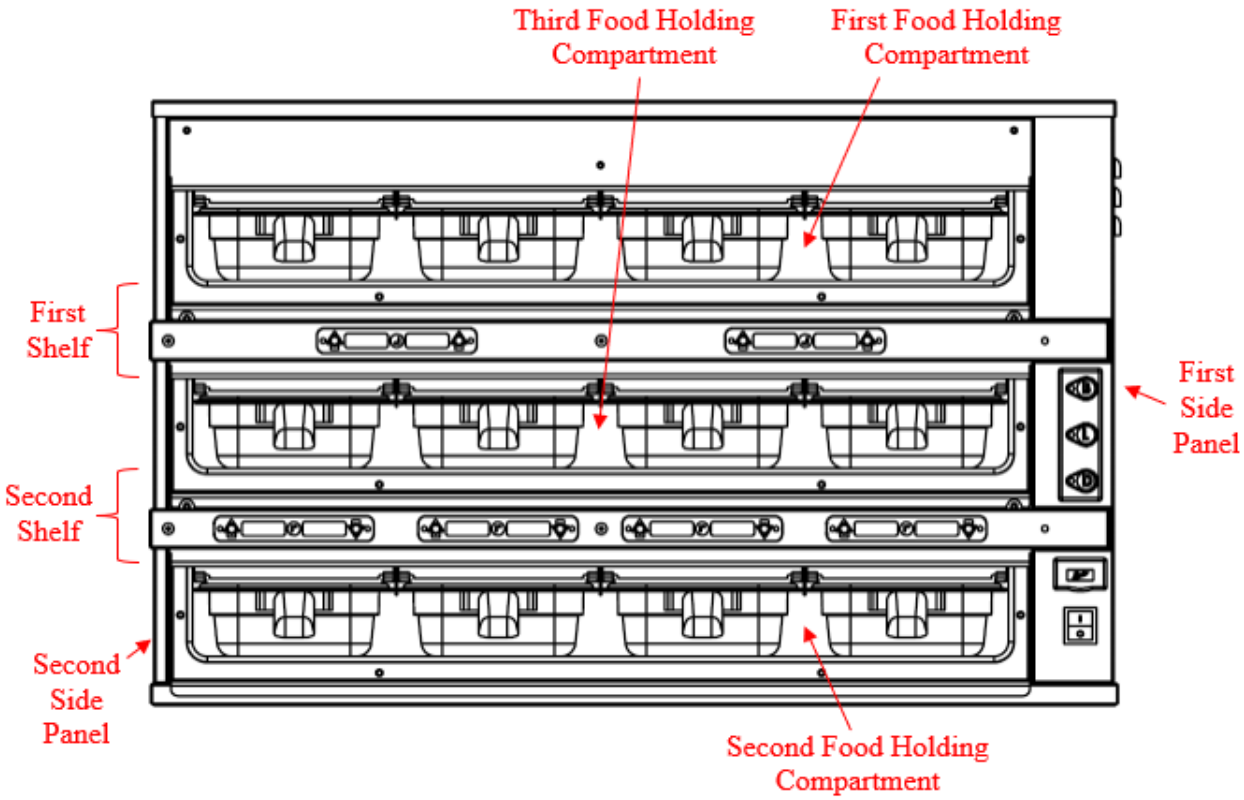
For reasons per Section IV(B)(1.b/1.c/1.d/1.e), it would have been obvious to hold different food types in different zones (fifth food type (e.g., turkey burger patties) in fifth zone, sixth food type (e.g., stuffed burger patties) in sixth zone) with different temperature setpoints by zone. EX1007: 12; EX1005: 16; EX1006: 1; EX1007: 9, 53; EX1003: ¶¶269, 279.

Accordingly, and per Section IV(B)(1.b/1.c/1.d/1.e), it would have been obvious to operate each zone (fifth/sixth) to an independent temperature setpoint (fifth/sixth setpoint, e.g., heatsink setpoint) by independently operating the zone's upper elements (ninth/eleventh) and independently operating the zone's lower element (tenth/twelfth), with expectation of success (IRHS' zone-capable system). EX1005: 16; EX1008: 16, 21; EX1003: ¶¶270, 280-281.

E. Claim 4

4.a.1/4.a.3

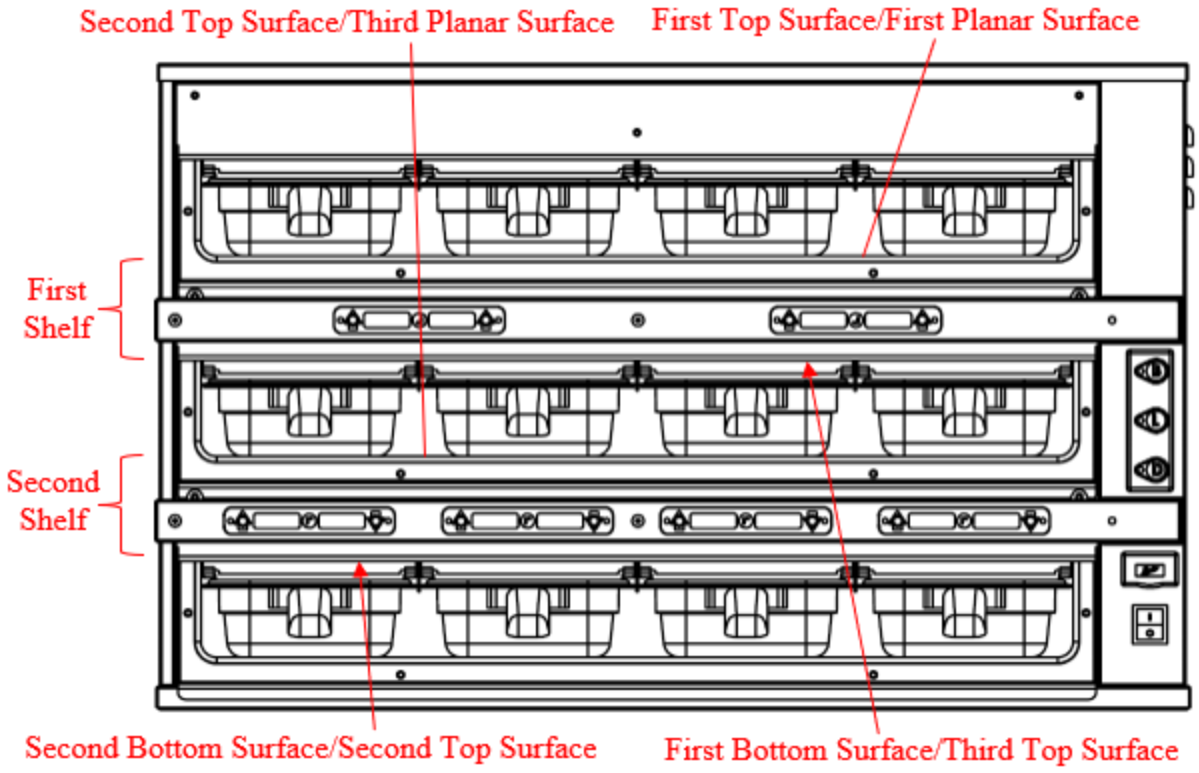
IRHS34's first and second shelves are between the side panels, the first shelf is between the first and second compartments, and the second shelf is between the second and third compartments. EX1003: ¶¶282-283, 285.



EX1005: 9.

4.a.2/4.a.4

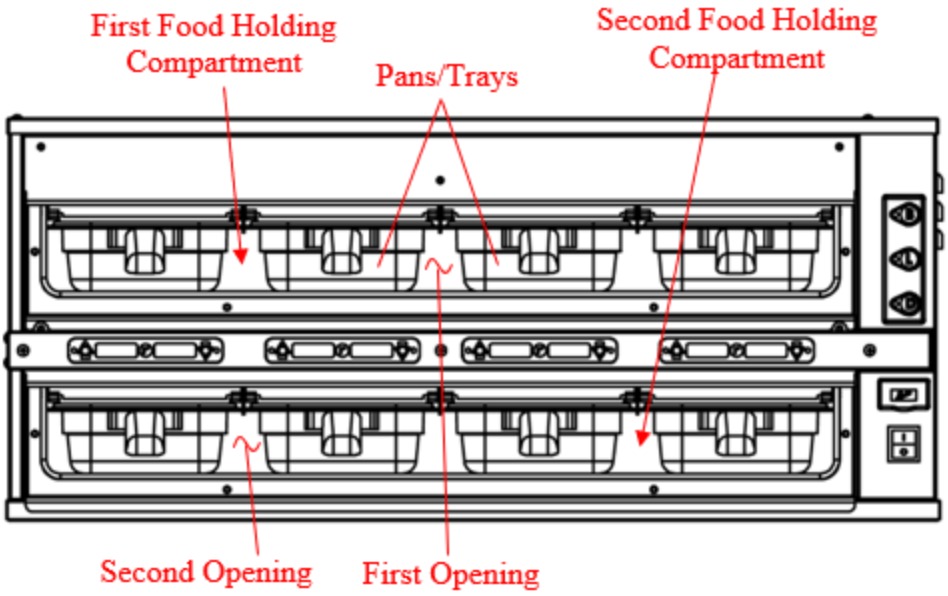
The shelves have top surfaces (first/third planar surface) and bottom surfaces (third/second top surface). EX1003: ¶¶284, 286-287.



EX1005: 9.

F. Claim 5

Per Section IV(B)(1.a.4/1.a.8), pans/trays pass through the openings into the compartments. EX1003: ¶¶288-290, 296-297, 303-304, 310-311.



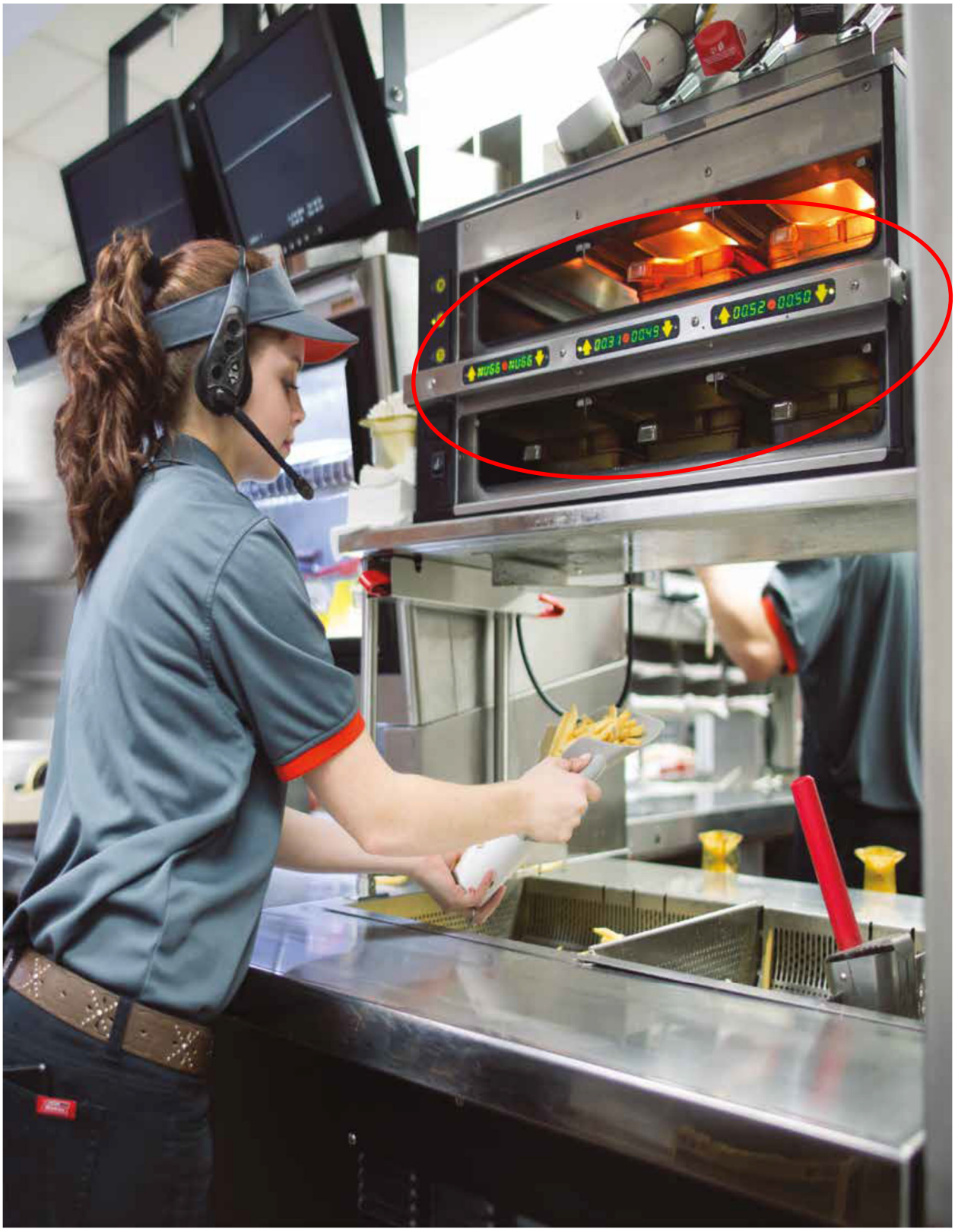
EX1005: 8.

IRHS Documents show pans/trays installed via the openings. EX1003: ¶¶291-292, 298-299, 305-306, 312-313.



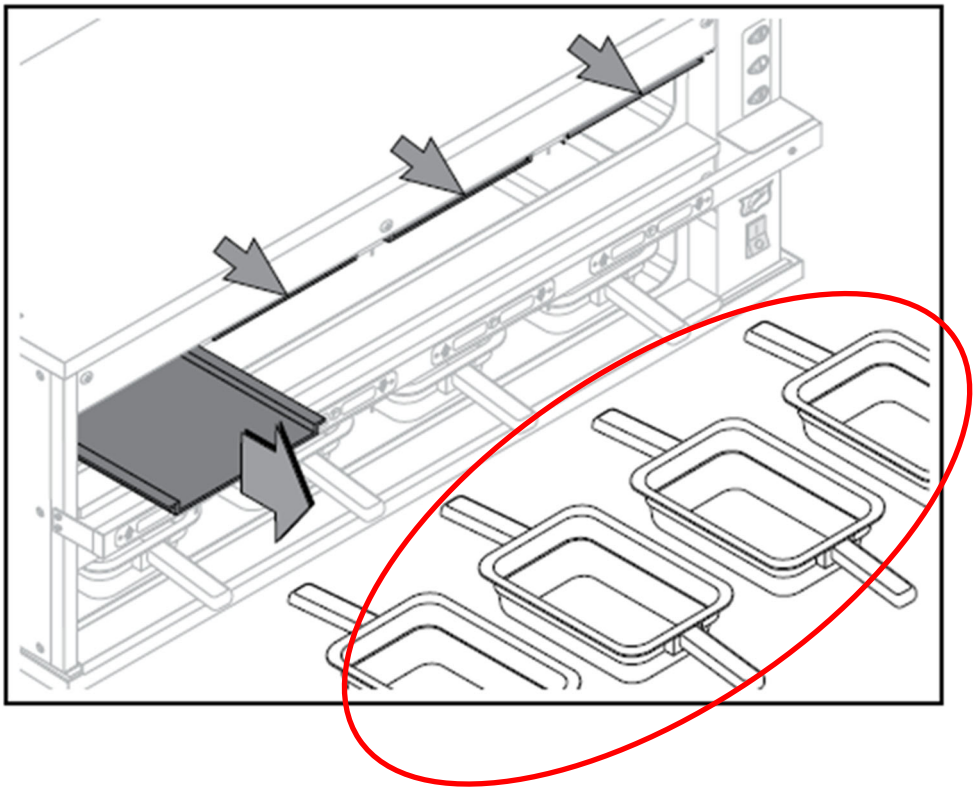
EX1007: 32.


Hot & consistent
food
Food





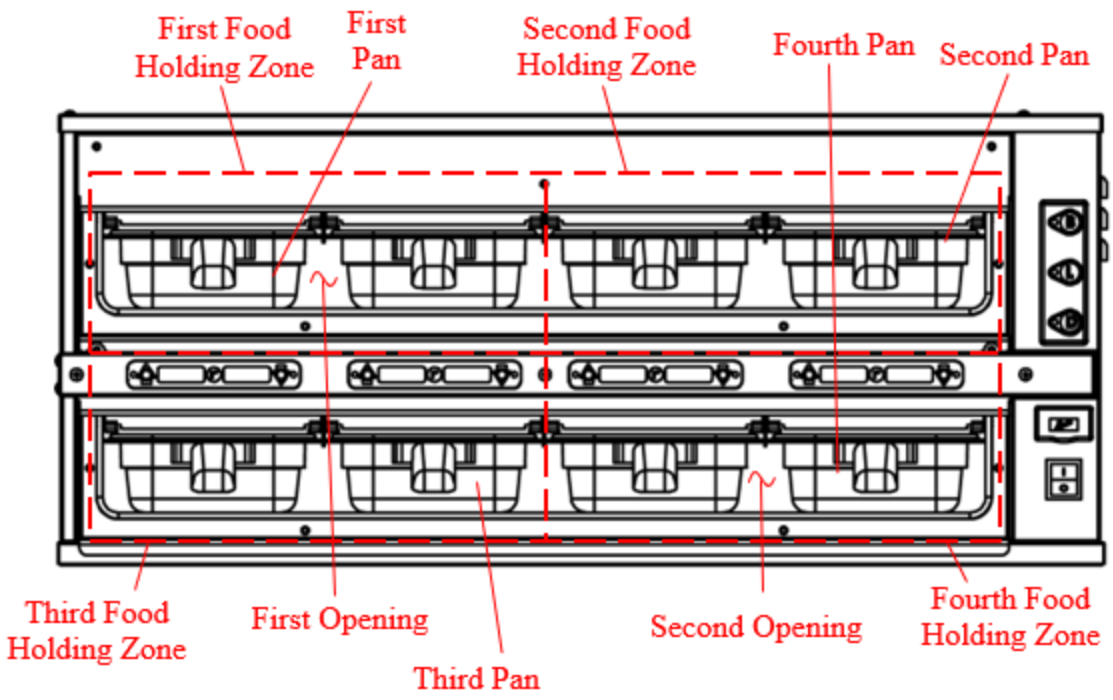
EX1007: 5, 36, 52.



EX1008: 16.

Per Section IV(B)(1.b/1.c/1.d/1.e), it would have been obvious to hold four different food types in IRHS24's four zones. EX1006: 1; EX1005: 4, 16; EX1007: 51, 53; EX1003: ¶¶293, 300, 307, 314.

It would have been obvious to receive the pans/trays (first-fourth) with the different food types (first-fourth) through the respective openings (first, second) providing access to the zones (first opening for first and second zones, second opening for third and fourth zones) to position the different food types (first-fourth) in the respective zones intended to accomplish the different/zoned heating to warm the food before serving, with reasonable expectation of success (openings sized and shown for such use). Sections IV(B)(1.a.2/1.a.5), IV(B)(1.a.4/1.a.8), IV(B)(1.b/1.c/1.d/1.e); EX1007: 8, 32, 36; EX1005: 8; EX1013: ¶[0004]; EX1003: ¶¶294-295, 301-302, 308-309, 315-317.

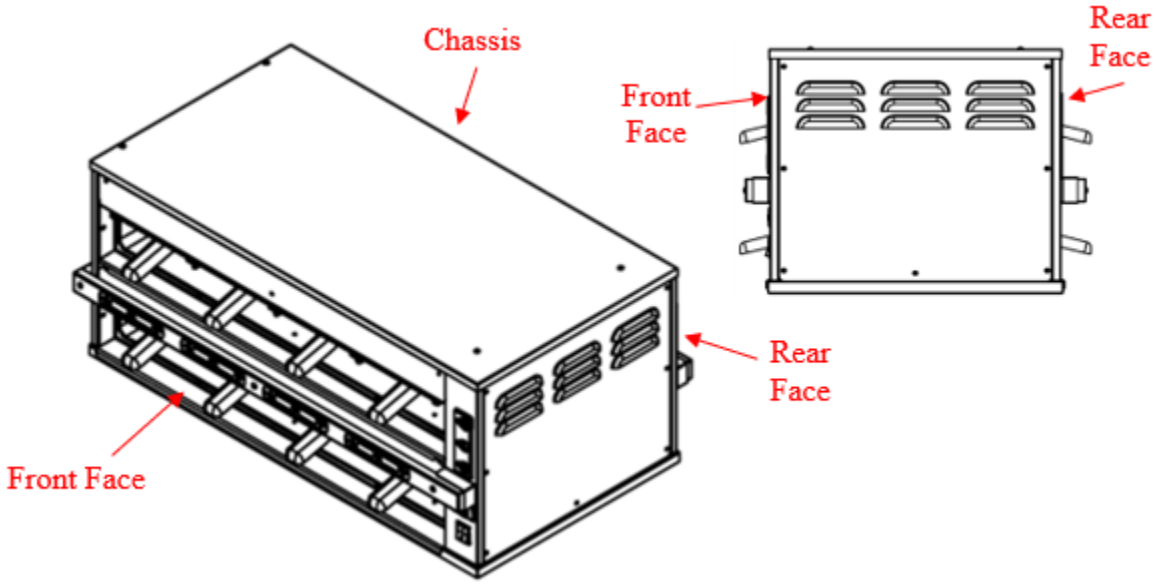


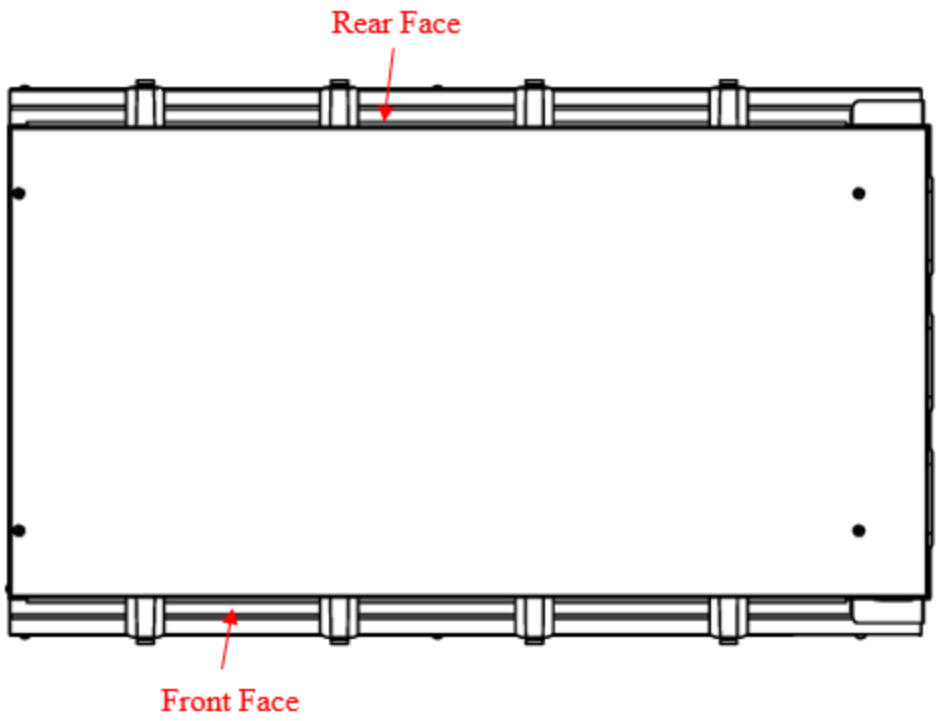
EX1005: 8.

G. Claim 6

6.a

IRHS24 has a rear face. EX1003: ¶¶318-319.





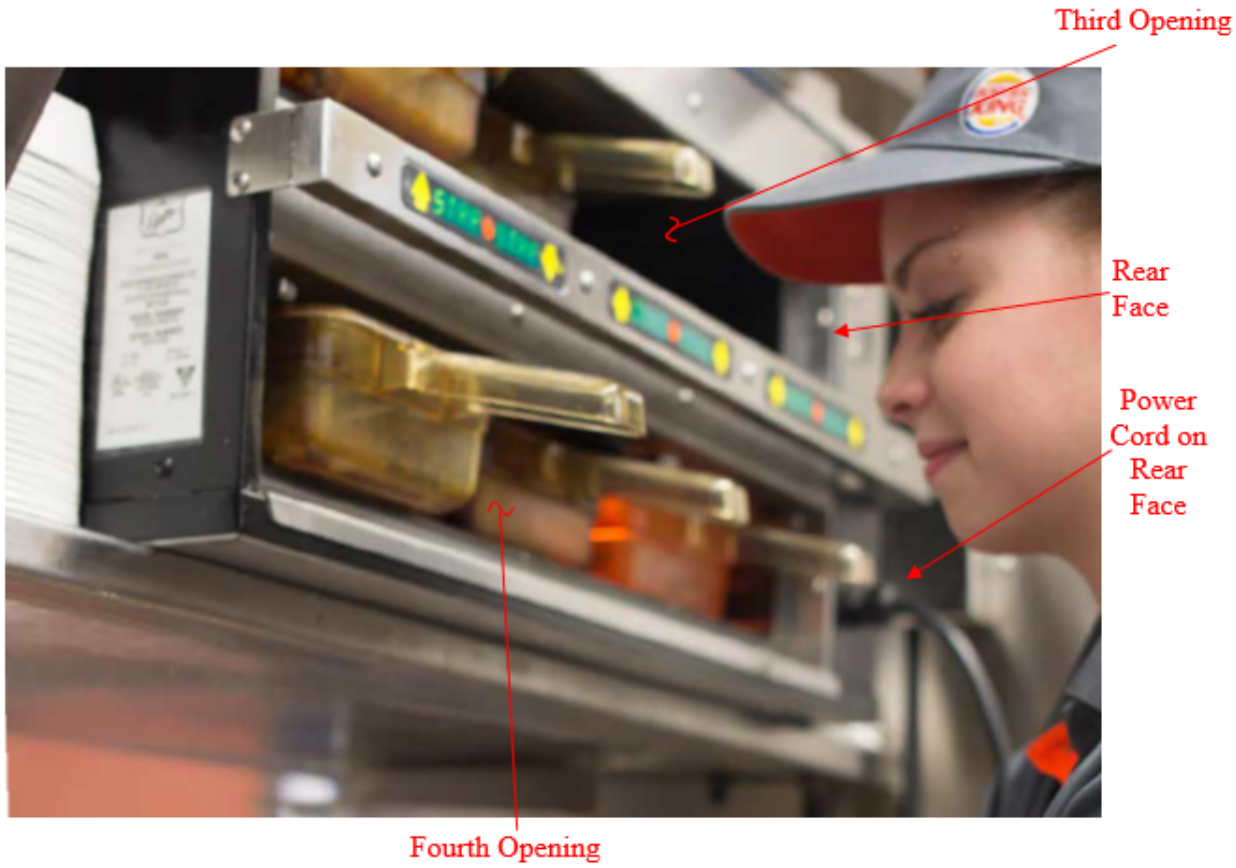
EX1005: 8.

6.b/6.c

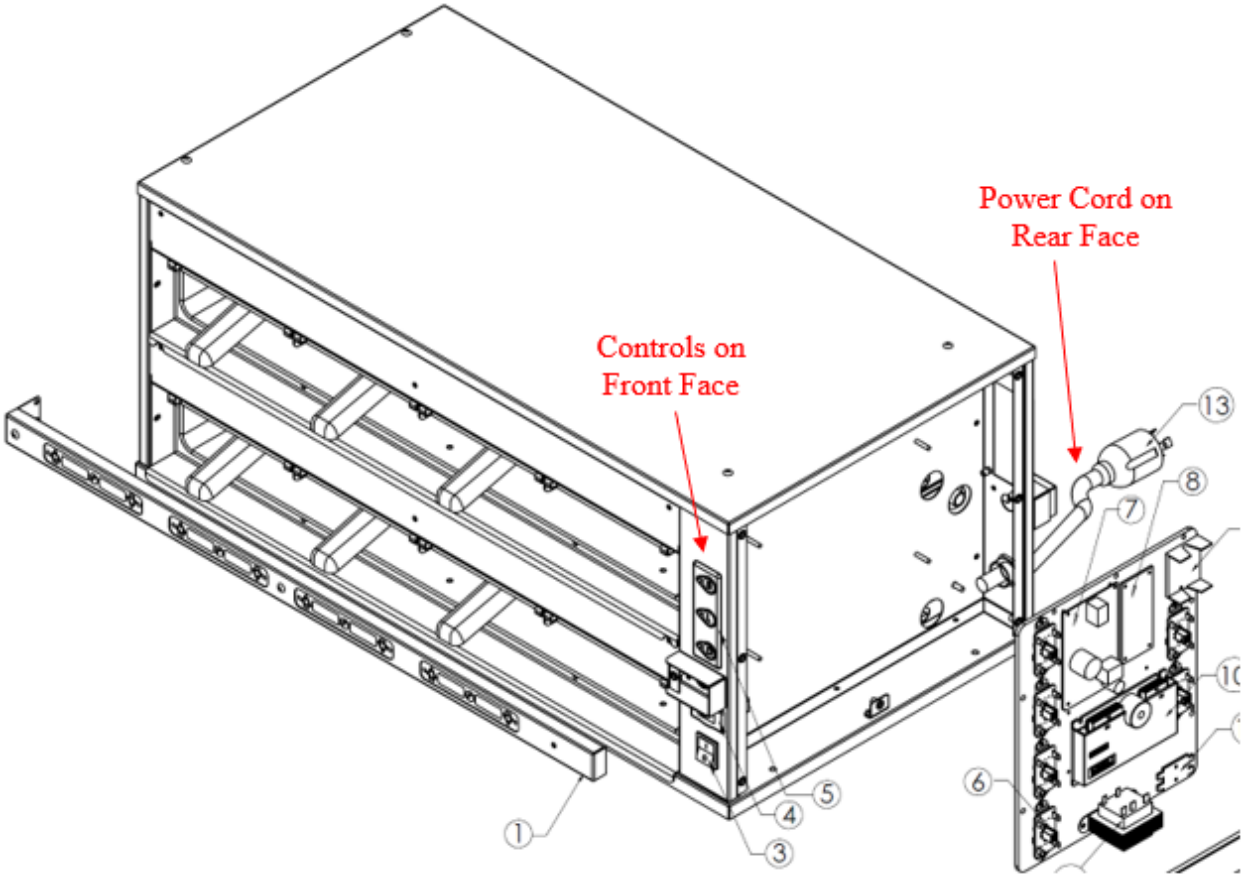
IRHS's front and rear faces are generally mirror images (front including side controls, rear including power cord) with similar openings. EX1003: ¶¶320-322, 326, 332.


First Opening
Controls on Front Face
Second Opening
Front Face


Third Opening
Rear Face
Power Cord on Rear Face
Fourth Opening

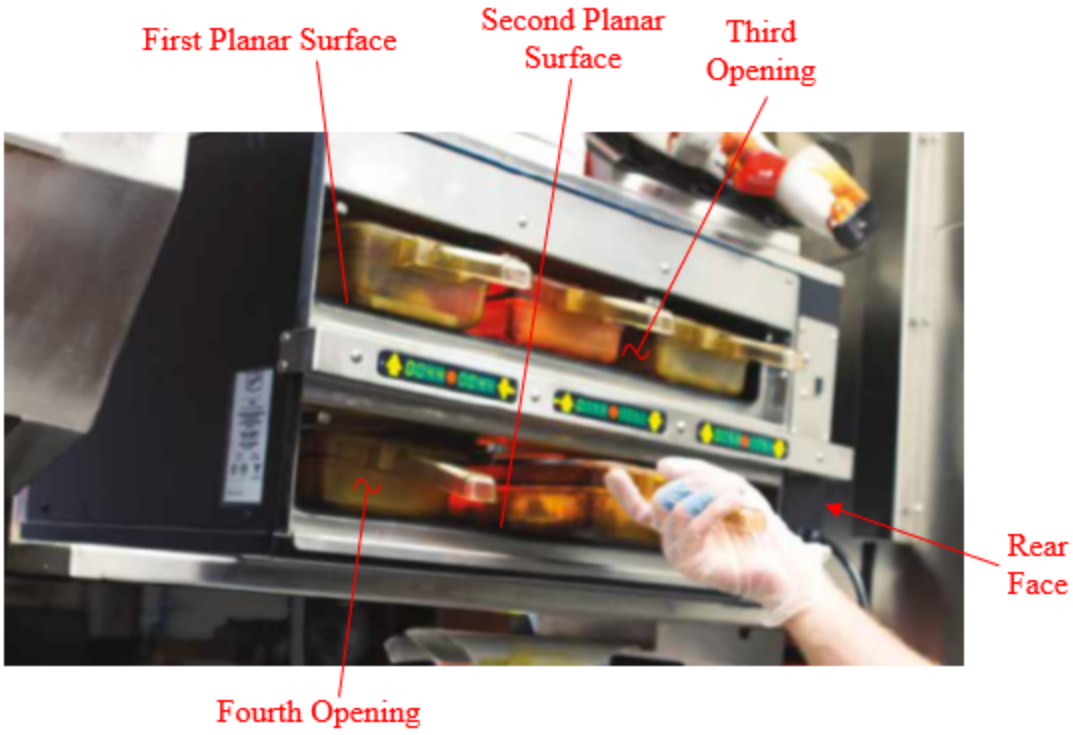


EX1007: 28, 51, 52.



EX1005: 19.

Third and fourth rear face openings allow tray/pan passage into the first and second compartments and onto the respective planar surfaces. EX1003: ¶¶327-328, 331, 333.

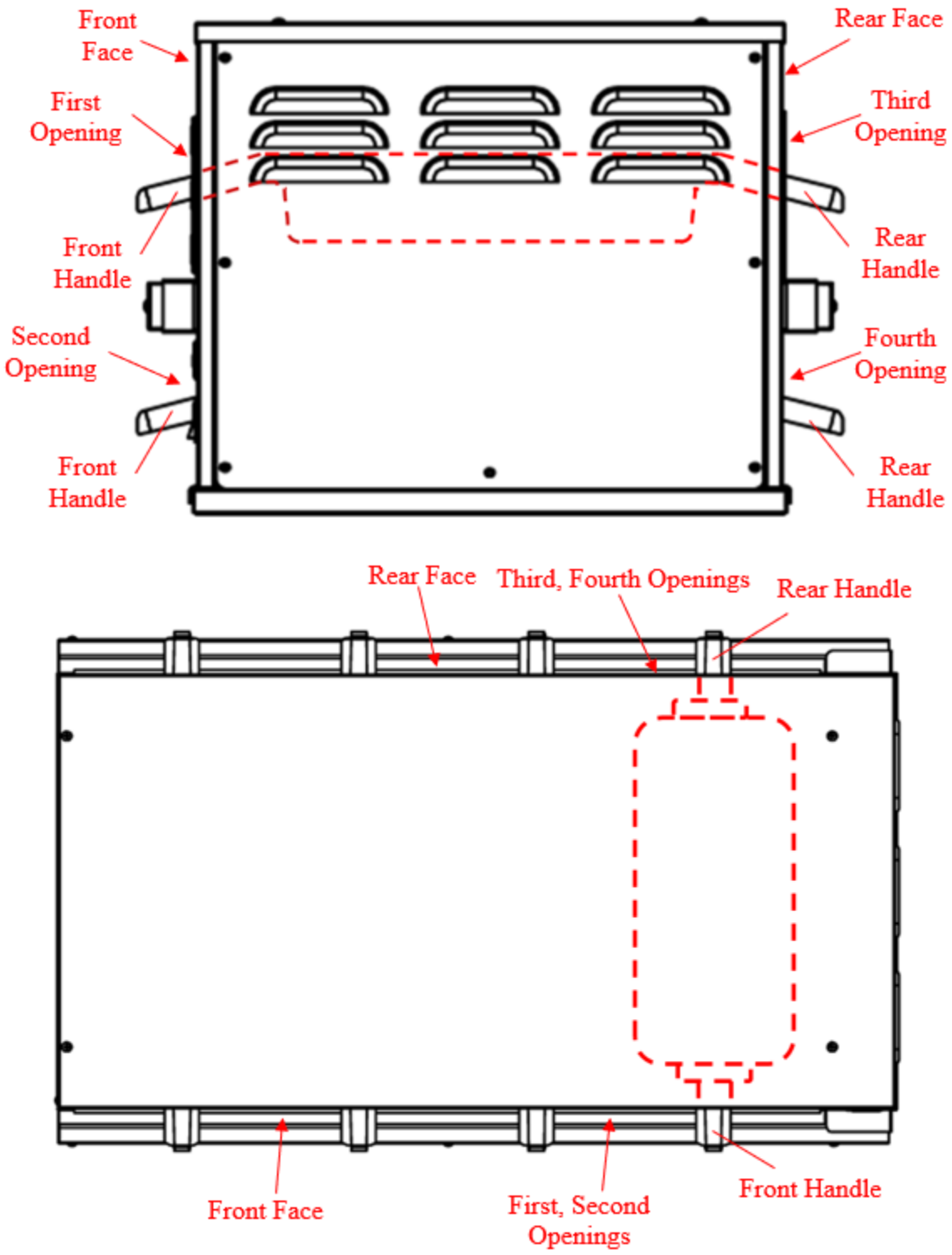


EX1007: 52.

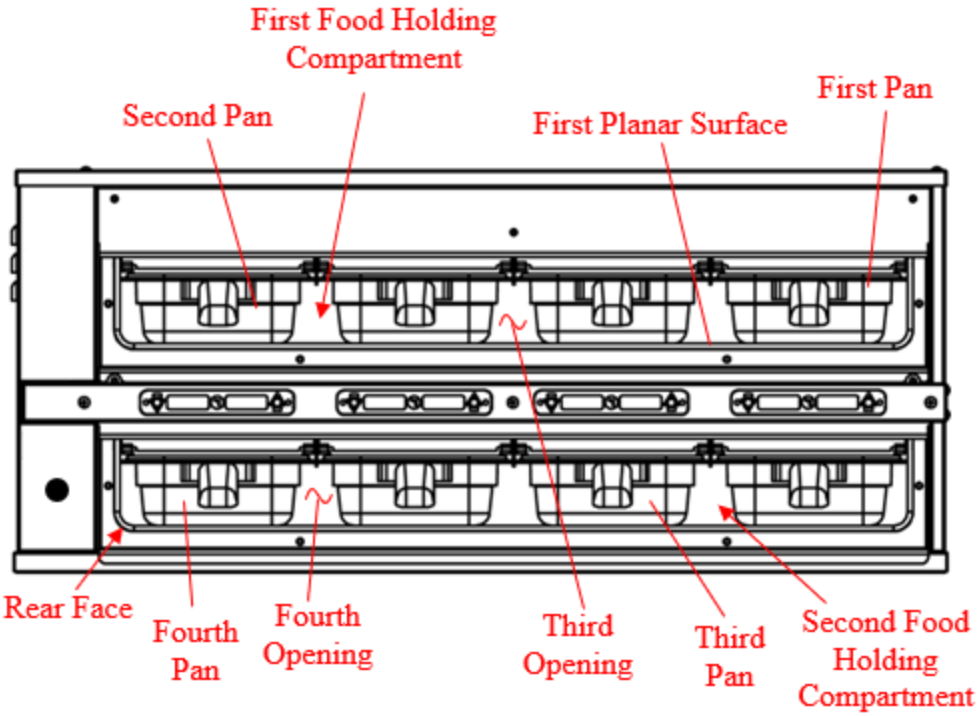
POSA understands this applies to IRHS24 (illustrated pan handles extending forward/rearward out front/rear openings), or, in view of IRHS23 above, would have been obvious to permit pass-through usage. EX1007: 67; EX1010: Figs. 1, 6, ¶[0014]; EX1011: Figs. 1-2; EX1003: ¶¶323-325, 329-330, 334-335.



EX1007: 58.


Front Face
Rear Face
First Opening
Third Opening
Front Handle
Rear Handle
Second Opening
Fourth Opening
Front Handle
Rear Handle
Rear Face
Third, Fourth Openings
Rear Handle
Front Face
First, Second Openings
Front Handle

EX1005: 8.

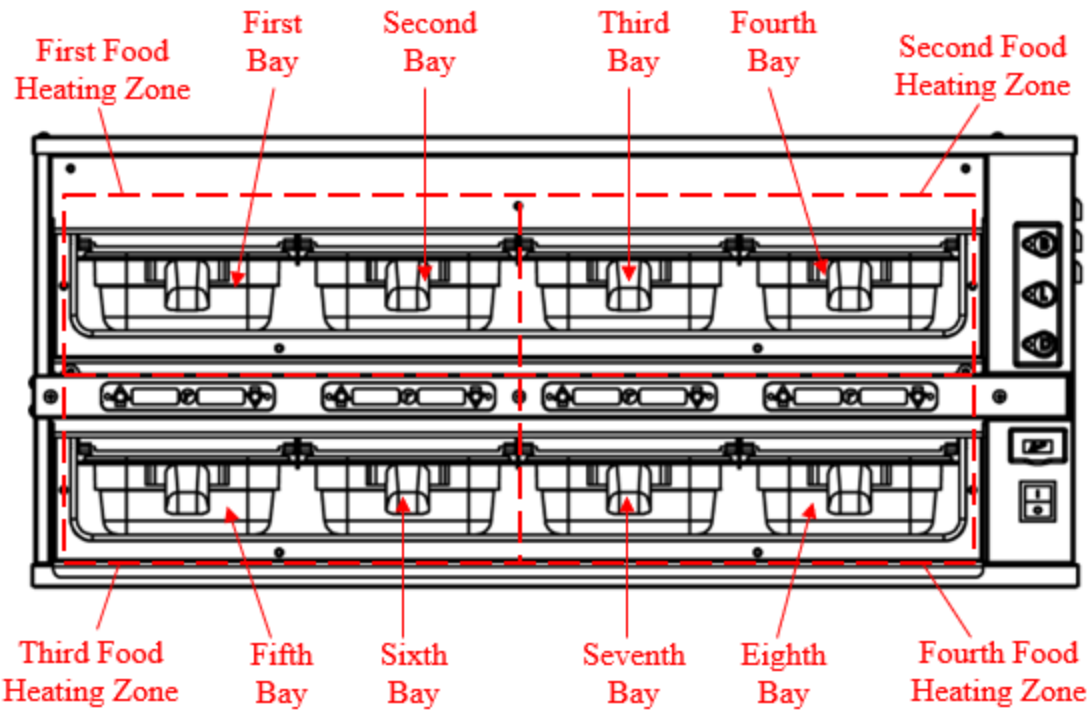


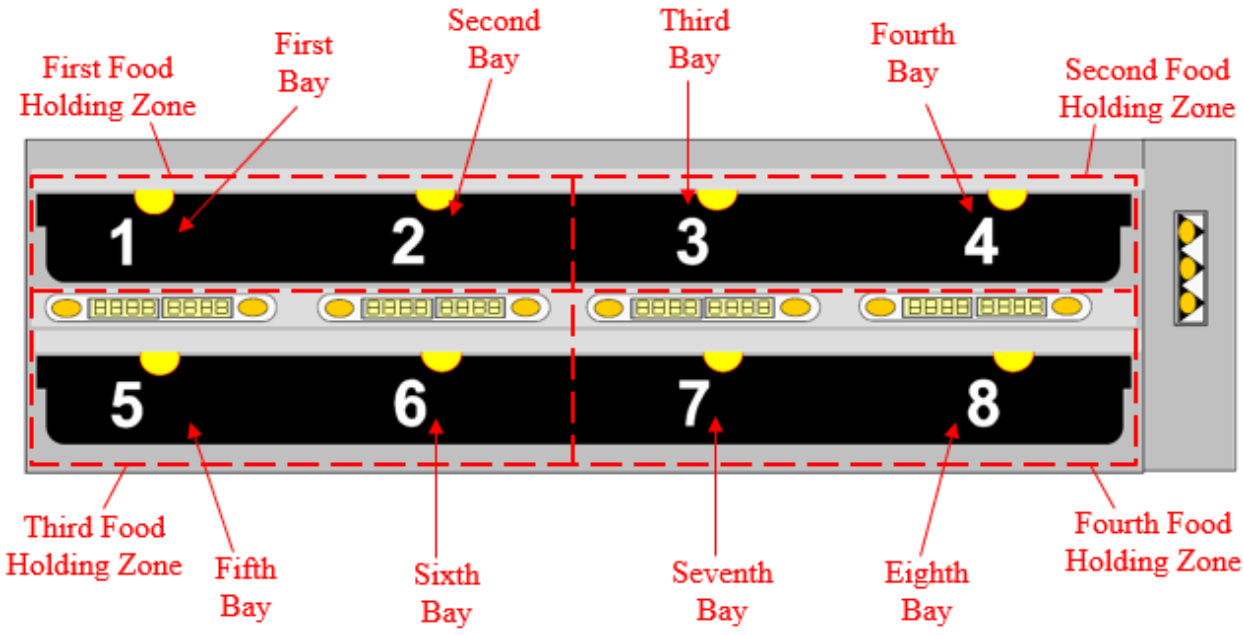
EX1005: 8 (modified to represent rear).

H. Claim 8

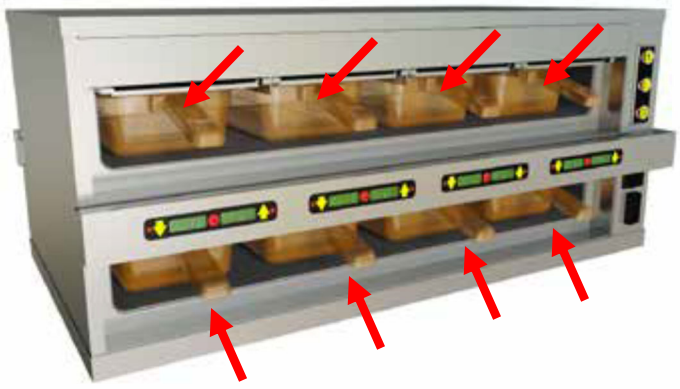
8.a

IRHS24 has eight total bays, two within each zone. EX1003: ¶¶336-337.


First Food Heating Zone
First Bay
Second Bay
Third Bay
Fourth Bay
Second Food Heating Zone
Third Food Heating Zone
Fifth Bay
Sixth Bay
Seventh Bay
Eighth Bay
Fourth Food Heating Zone


First Food Holding Zone
First Bay
Second Bay
Third Bay
Fourth Bay
Second Food Holding Zone
1
2
3
4
5
6
7
8
Third Food Holding Zone
Fifth Bay
Sixth Bay
Seventh Bay
Eighth Bay
Fourth Food Holding Zone

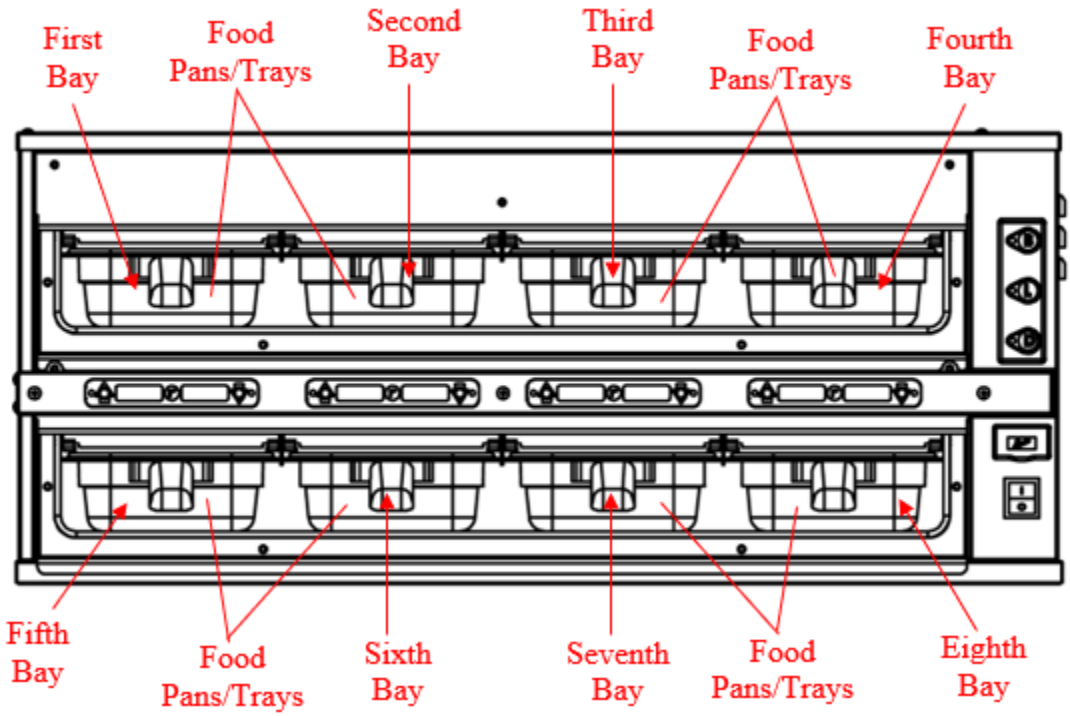
EX1005: 8, 25.



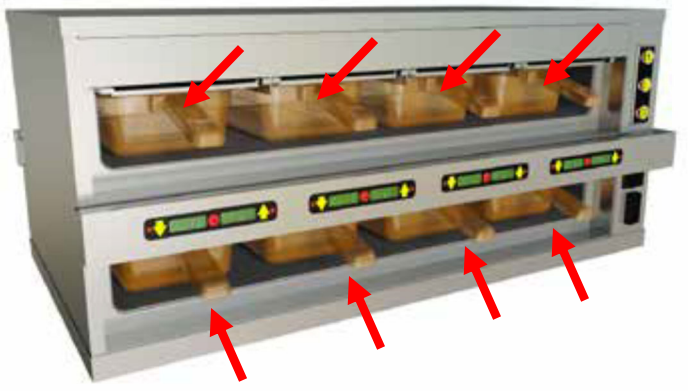
EX1007: 56.

8.b

Each bay receives a pan/tray. EX1003: ¶¶338-339.



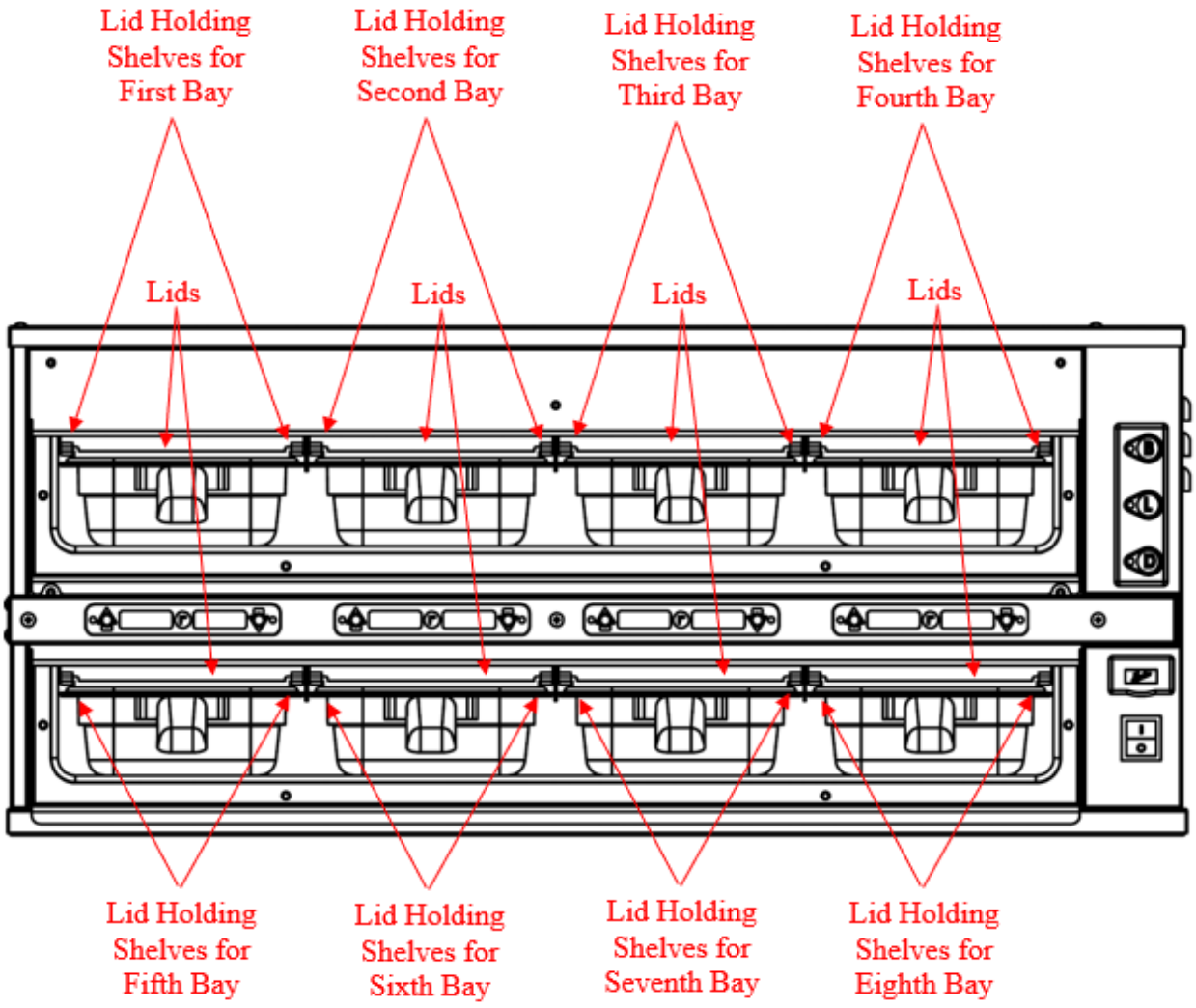
EX1005: 8.



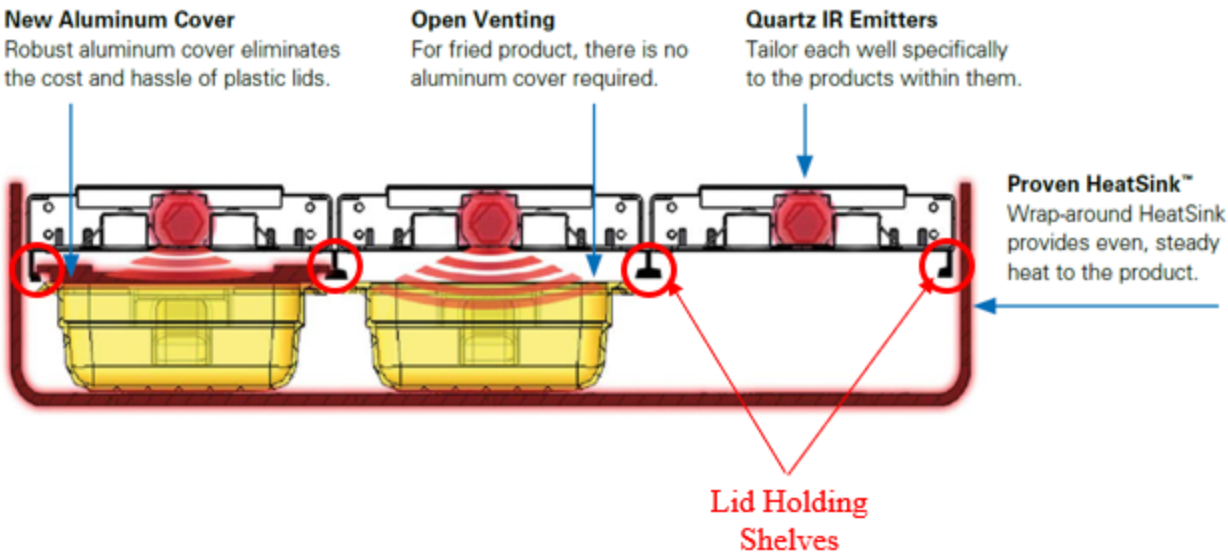
EX1007: 56.

I. Claim 9

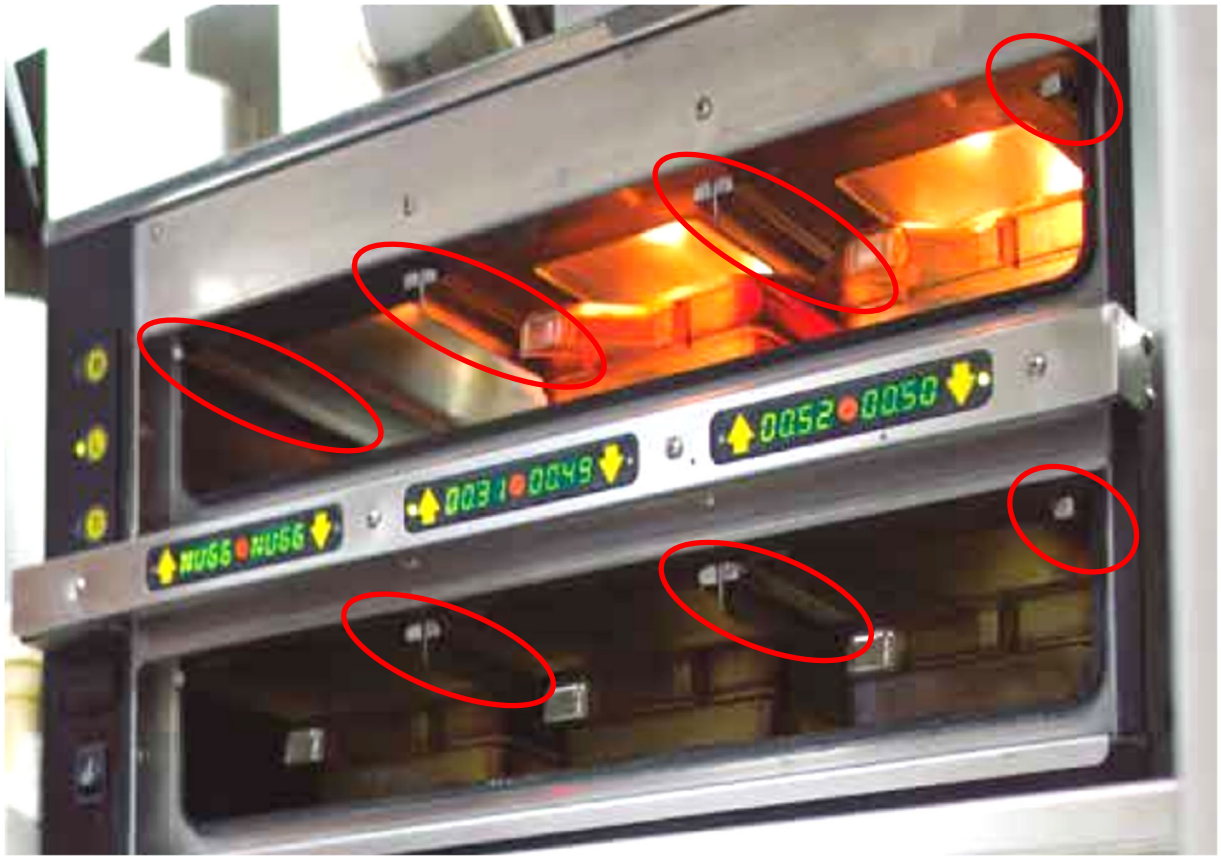
IRHS24 has lid-holding shelves (receiving lids) associated with respective bays. EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶¶340-342.


Lid Holding Shelves for First Bay
Lid Holding Shelves for Second Bay
Lid Holding Shelves for Third Bay
Lid Holding Shelves for Fourth Bay
Lids
Lids
Lids
Lids
Lid Holding Shelves for Fifth Bay
Lid Holding Shelves for Sixth Bay
Lid Holding Shelves for Seventh Bay
Lid Holding Shelves for Eighth Bay

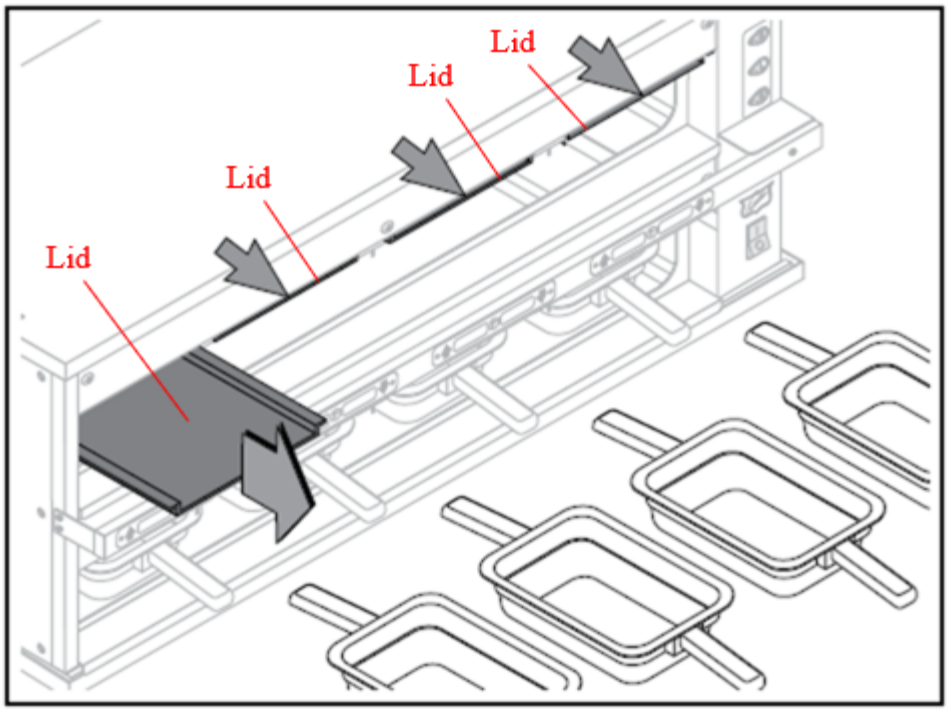
EX1005: 8.



EX1007: 53.



EX1007: 36.

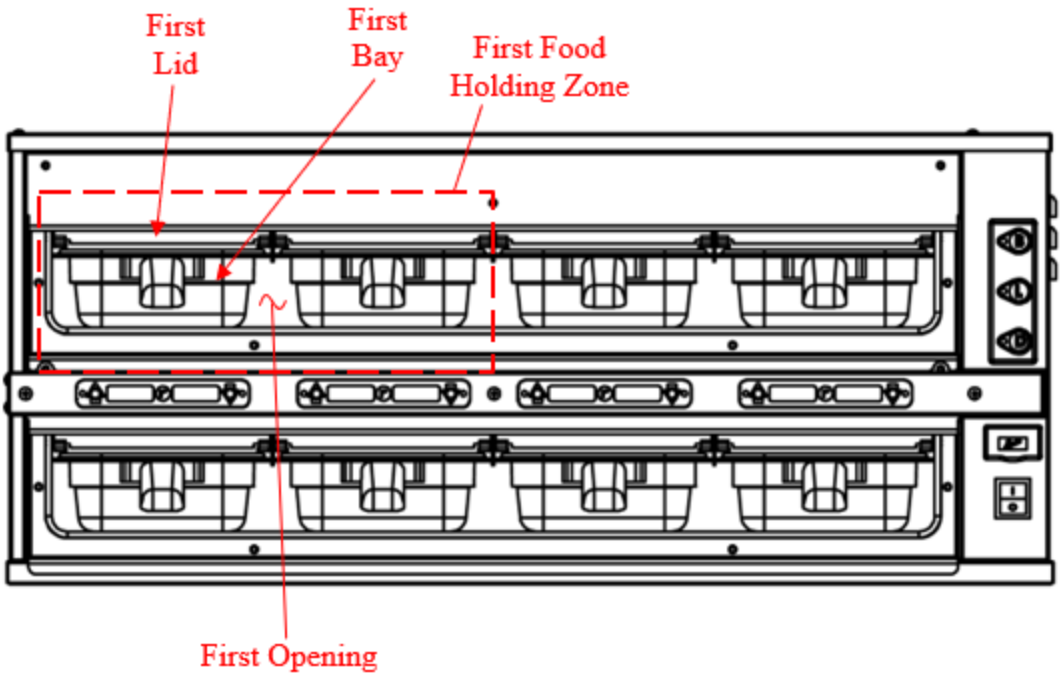


EX1008: 16.

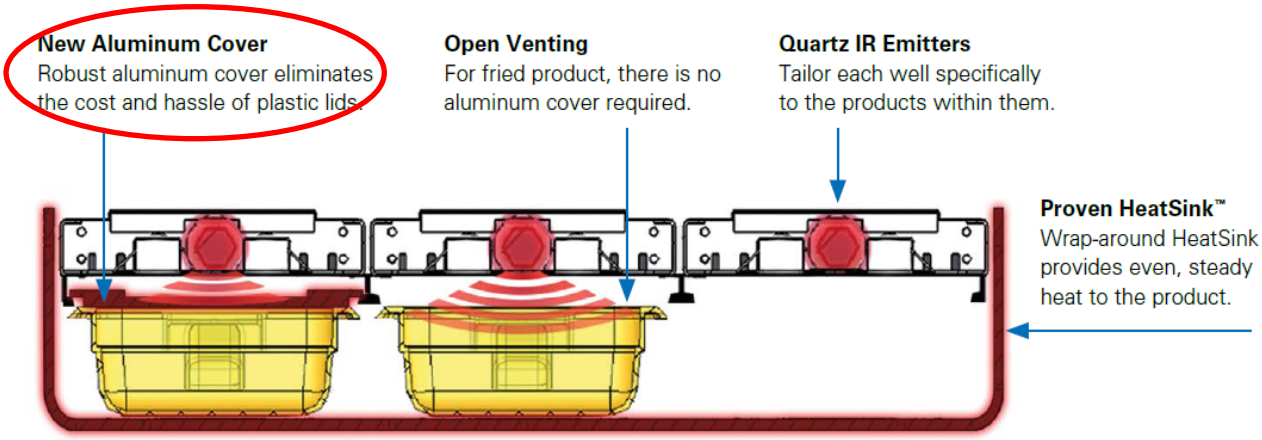
J. Claim 10

10.a

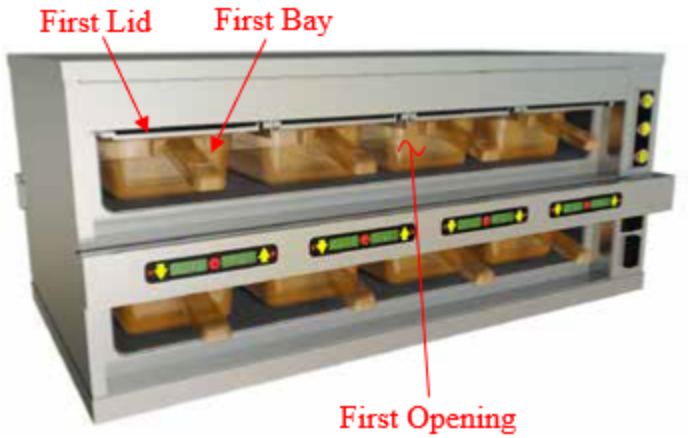
IRHS24 receives a first lid through the first opening into the first zone's first bay. EX1005: 4, 14, 16; EX1006: 1; EX1007: 51, 53, 58; EX1011: ¶¶[0032]-[0033]; EX1003: ¶¶343-346.



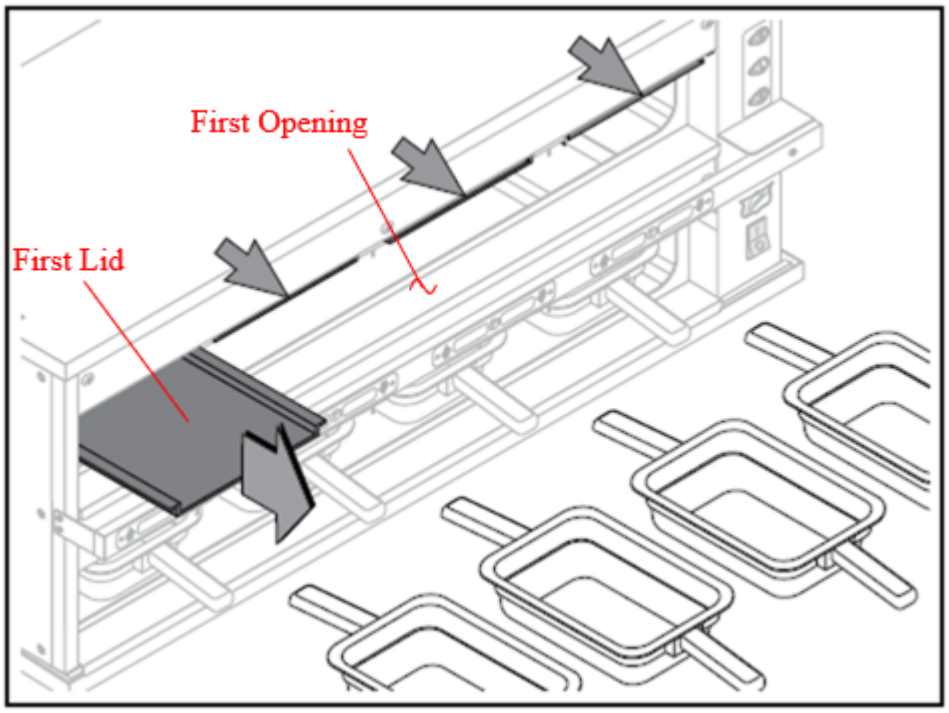
EX1005: 8.



EX1007: 53.



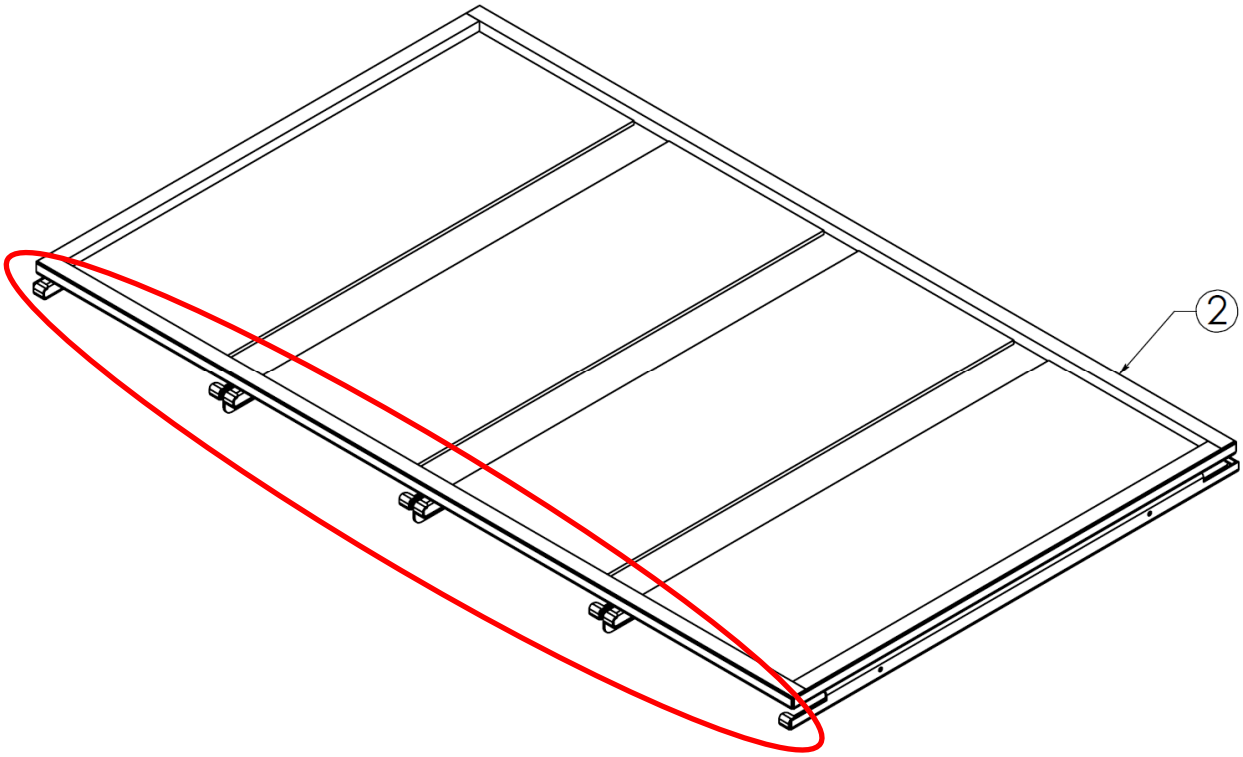
EX1007: 56.



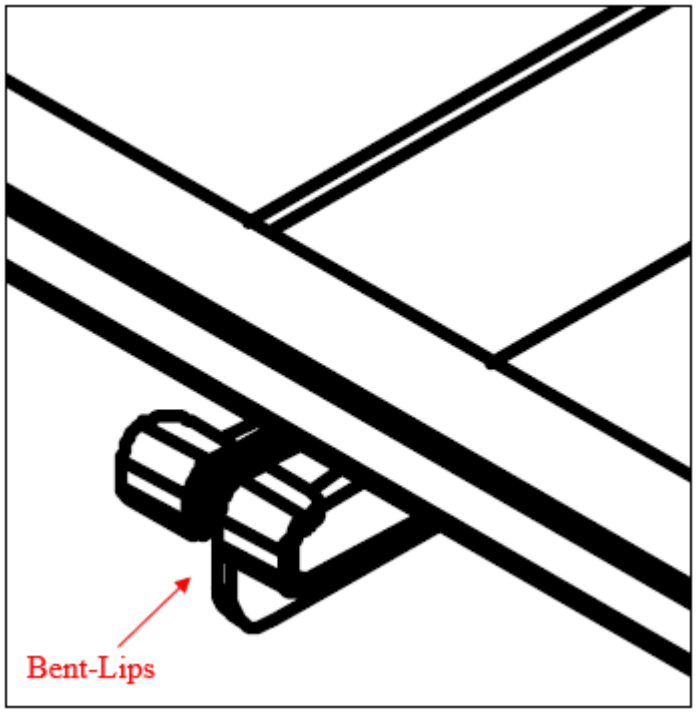
EX1008: 16 (installation direction opposite arrow).

10.b

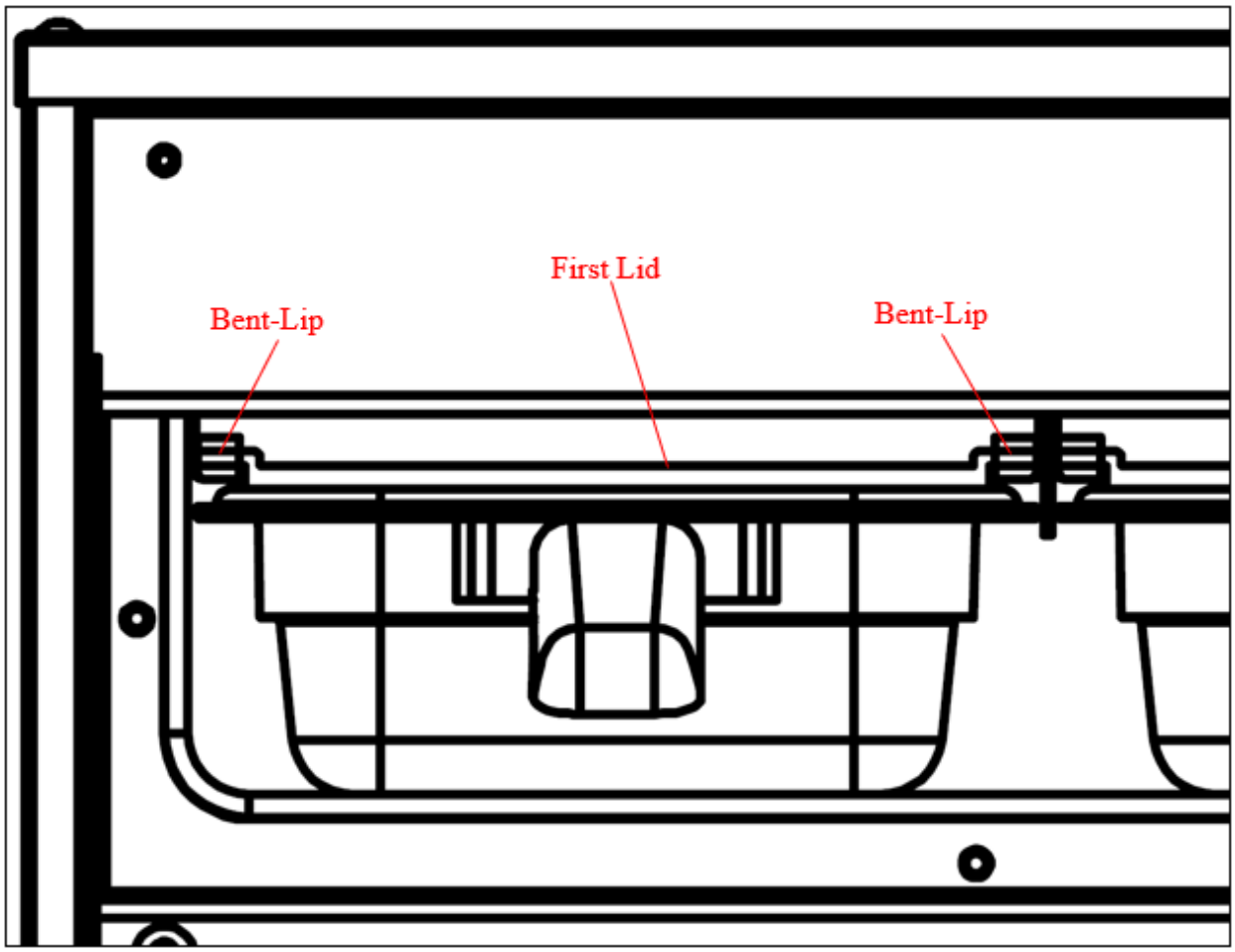
Bent-lips retain the first lid on the first bay's lid-holding shelves. EX1005: 19; EX1011: ¶¶[0035]-[0037], Figs. 9-14; EX1003: ¶¶347-348.



EX1005: 19.



EX1005: 19 (enlarged).

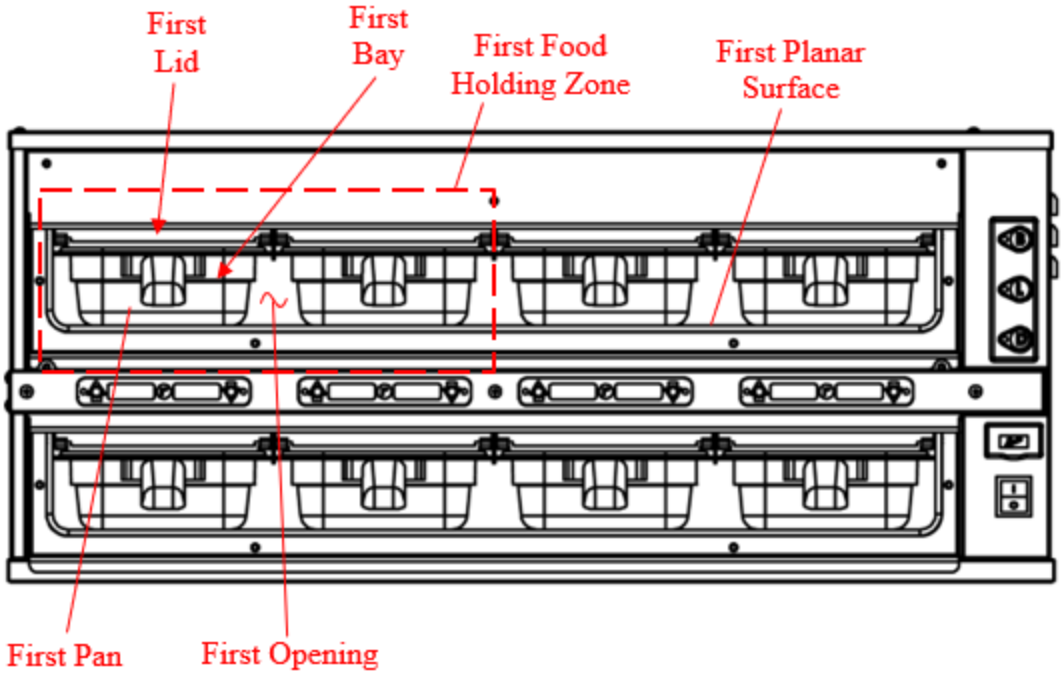


EX1005: 8 (enlarged).

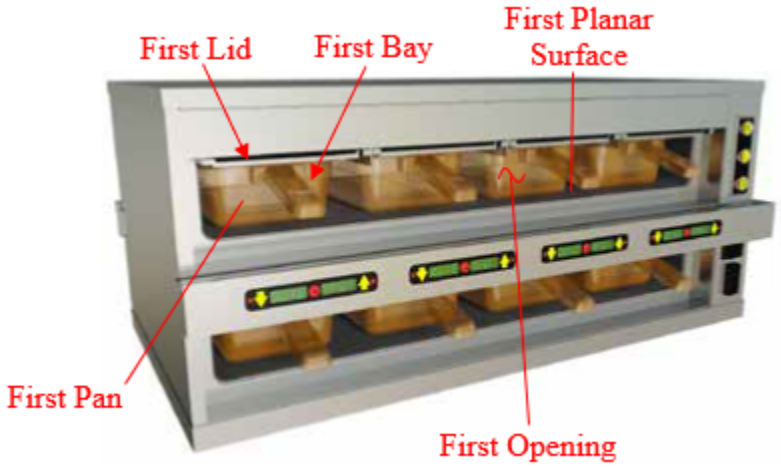
K. Claim 11

11.a

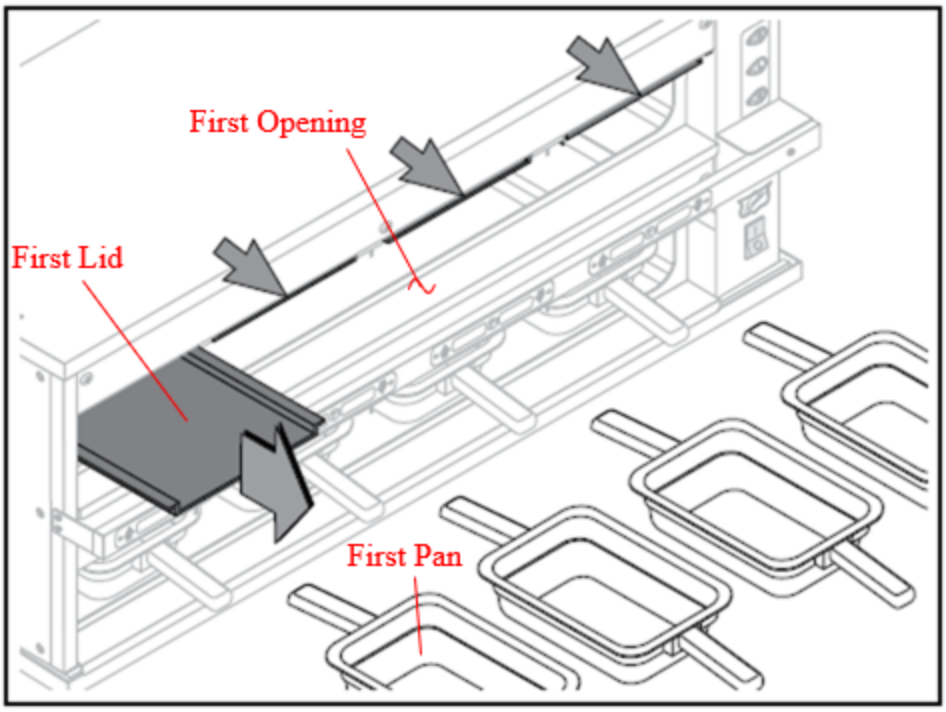
Per Sections IV(B)(1.a.4/1.a.8), IV(B)(1.b/1.c/1.d/1.e), IV(F), IV(H)-(I), it would have been obvious to receive a first pan/tray of first food type (e.g., burger patties) through the first opening into the first zone's first bay on the first planar surface under the lid to heat the food and maintain moisture. EX1003: ¶¶349-351.



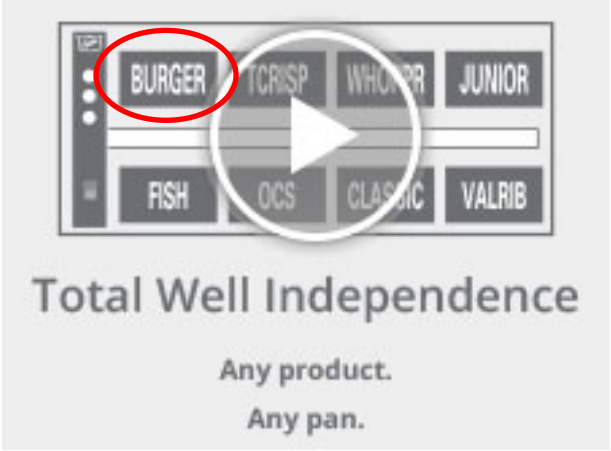
EX1005: 8.



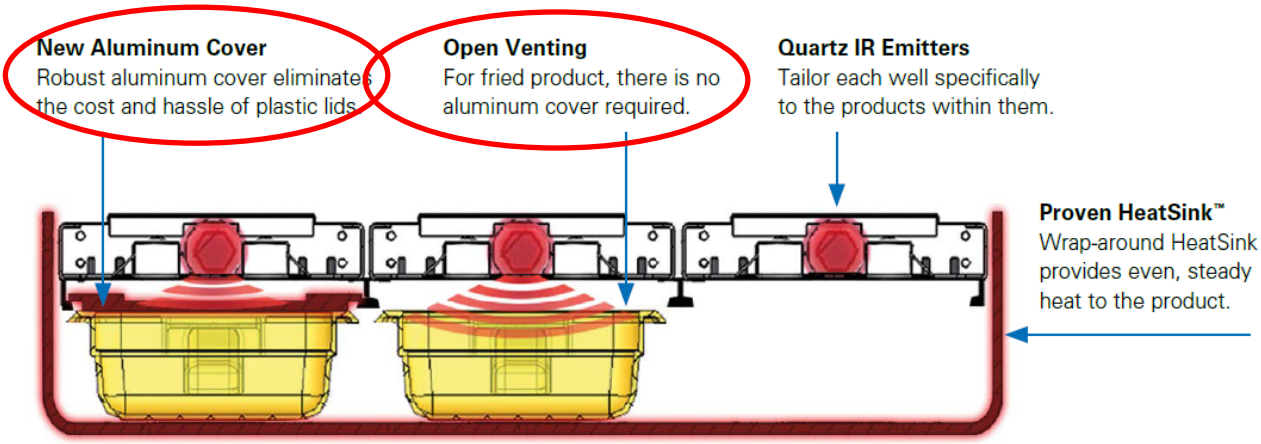
EX1007: 56.



EX1008: 16.



EX1007: 12.



EX1007: 53.

11.b

Per Sections IV(B)(1.a.4/1.a.8), IV(F), IV(H), it would have been obvious to receive a pan/tray through the first opening into the first zone's second bay onto the first planar surface. EX1003: ¶352.

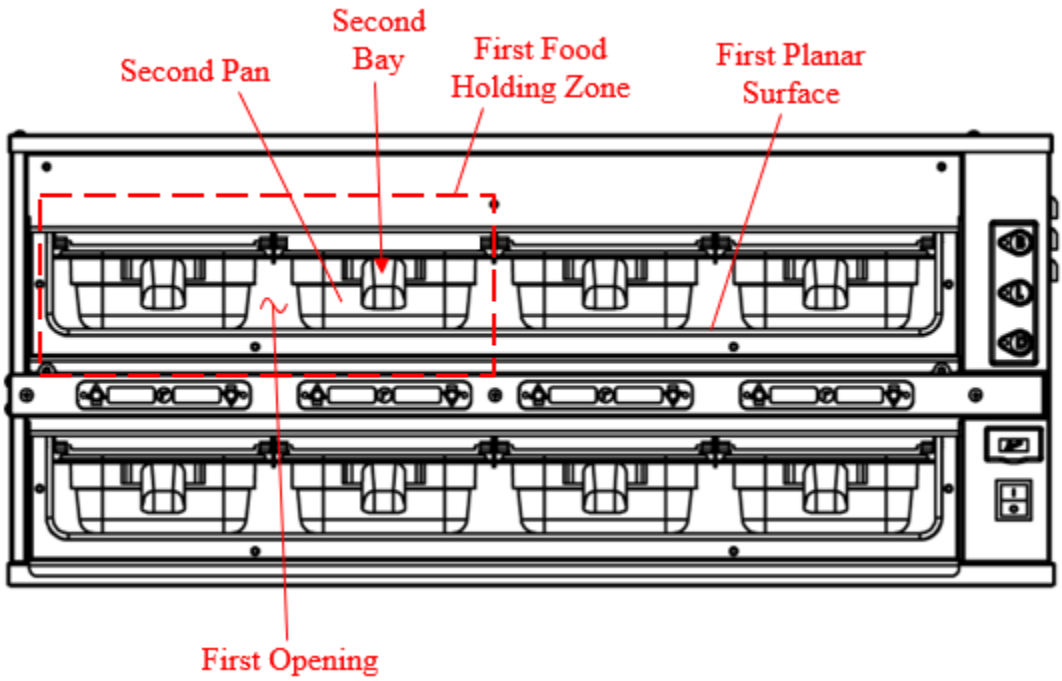
Given the diverse menu and "any product, any pan" flexibility, it would have been obvious to hold a different food product in the second bay. EX1007: 9, 12, 53; EX1005: 16; EX1006: 1; EX1003: ¶353.

The IRHS Documents teach first and second bays receiving different food types (burger patties and fried chicken (tenderscrip)). EX1003: ¶354.

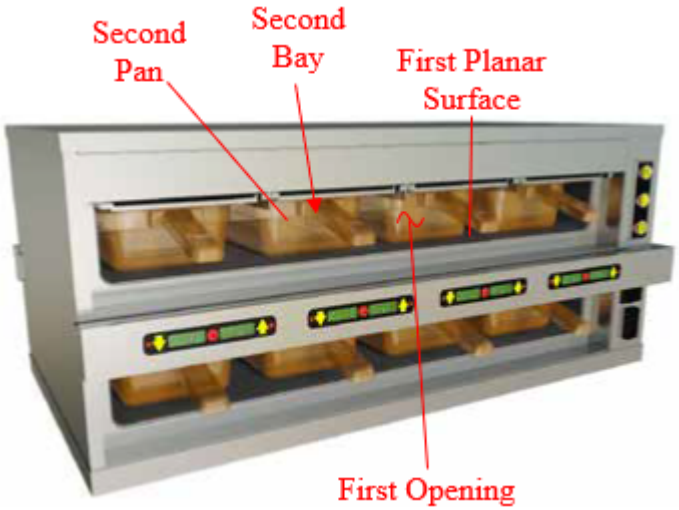


EX1007: 12.

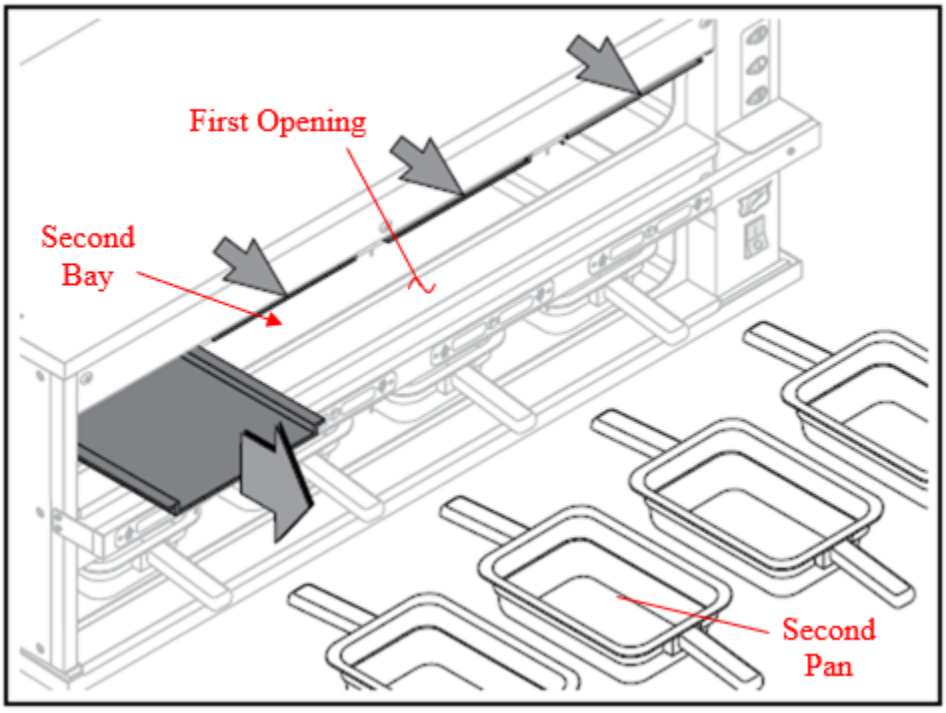
For these reasons, and others per Sections IV(B)(1.b/1.c/1.d/1.e), IV(F), it would have been obvious to receive a second pan/tray of a second food type (e.g., fried chicken) through the first opening into the second zone/second bay onto the first planar surface. EX1003: ¶355.



EX1005: 8.



EX1007: 56.

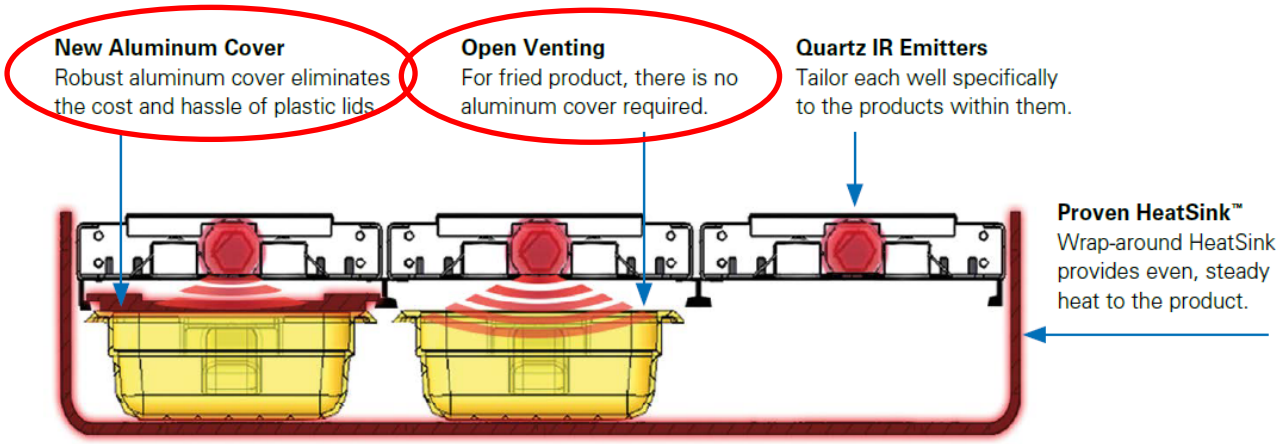


EX1008: 16.

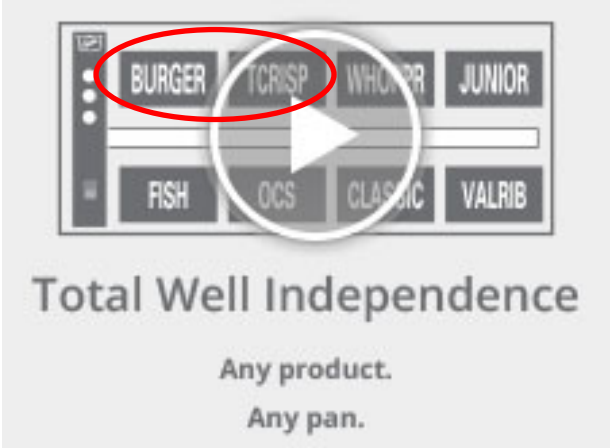
11.c

The first and second bays are operated to the first zone's first temperature setpoint by independently operating the first and second elements per Section IV(B)(1.b/1.c/1.d/1.e). EX1003: ¶356.

The IRHS Documents teach lids for broiled products (burger patties), no lids for fried products (fried chicken), and demonstrate adjacent covered/uncovered pans. EX1005: 4; 16; EX1007: 51; 53; EX1003: ¶¶357-358.



EX1007: 53.

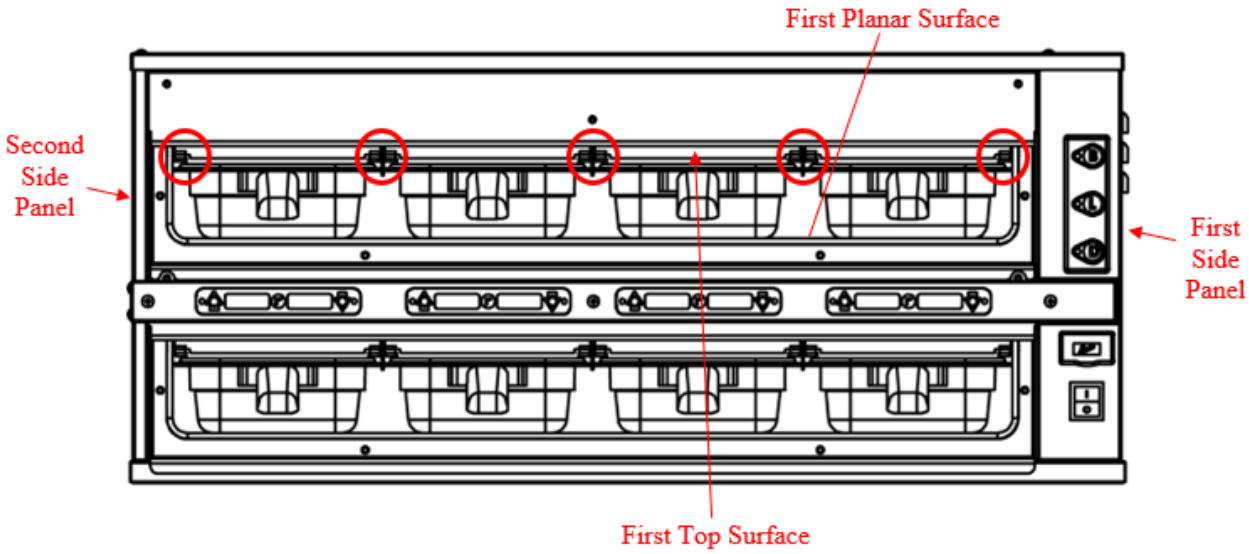


EX1007: 12.

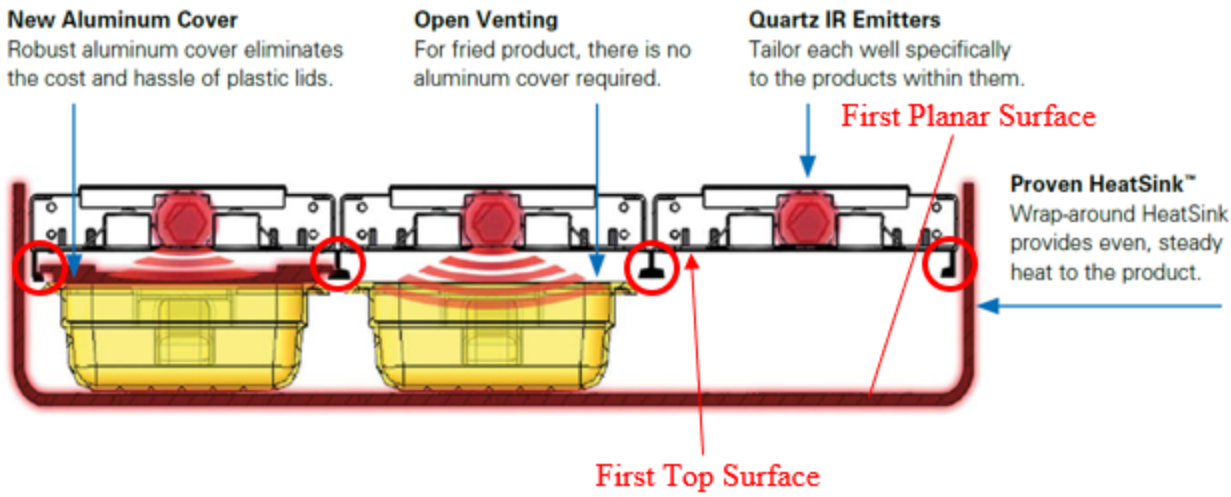
It would have been obvious to use the first lid for the first bay's burger patties to prevent drying and to not cover (vent) the second bay's fried chicken to prevent sogginess, resulting in the first lid maintaining increased moisture in the first pan/tray compared to the second pan/tray, with reasonable expectation of success (discrete lids permitting adjacent lid/no-lid use). EX1013: ¶[0006], ¶[0044]; EX1017: 6:45-53; EX1007: 53; EX1003: ¶¶359-360.

L. Claim 12

Some lid-holding shelves downwardly depend from the first top surface toward the first planar surface (unobstructed between the side panels). EX1003: ¶¶361-363.



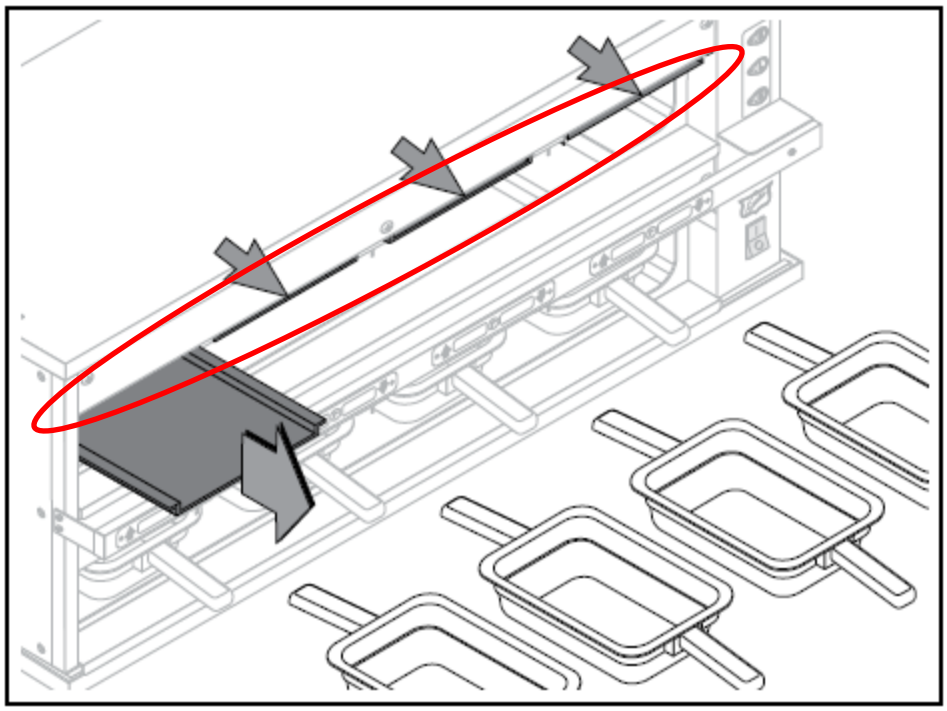
EX1005: 8.



EX1007: 53.



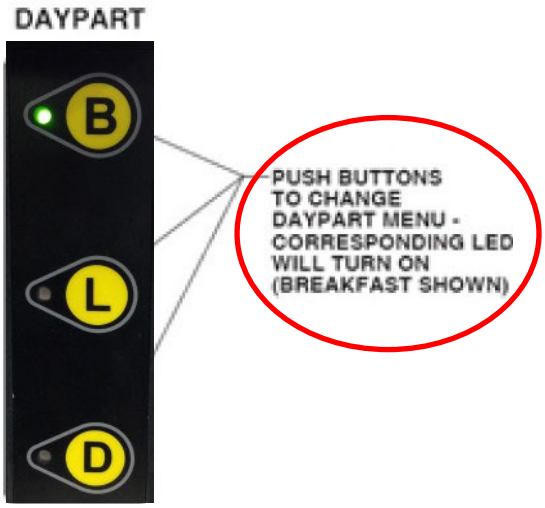
EX1007: 36.



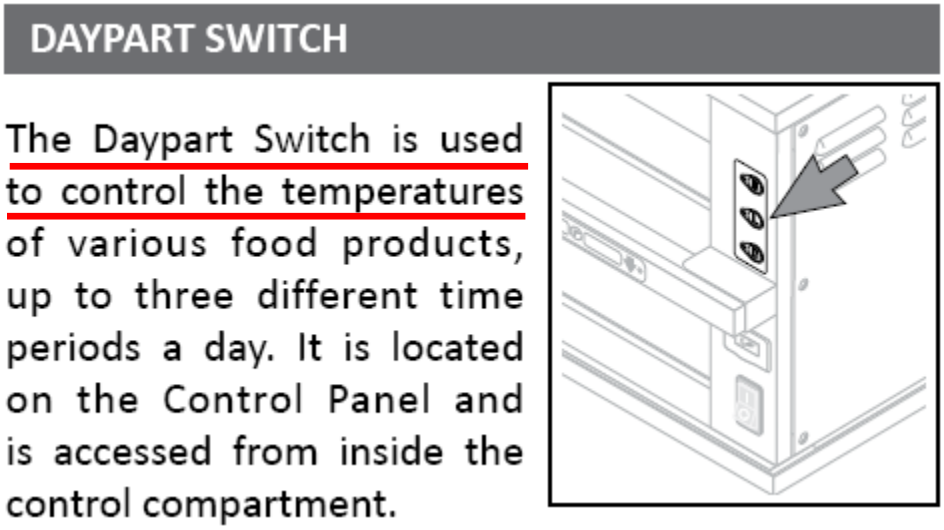
EX1008:16.

M. Claim 16

A global daypart interface allows users to select among "Breakfast, Lunch, and Dinner menus" (B/L/D) to change the food type and corresponding temperature settings (first temperature setpoint) for each zone. EX1005: 16; EX1006: 1; EX1008: 54-55; EX1027: ¶[0011]; EX1003: ¶¶364-365. Daypart buttons assign unit-wide pre-programmed menus/arrangements of food types, and those food types carry associated temperature setpoints. EX1005: 16; EX1008: 57; EX1027: ¶[0007], ¶[0011]; EX1003: ¶366.

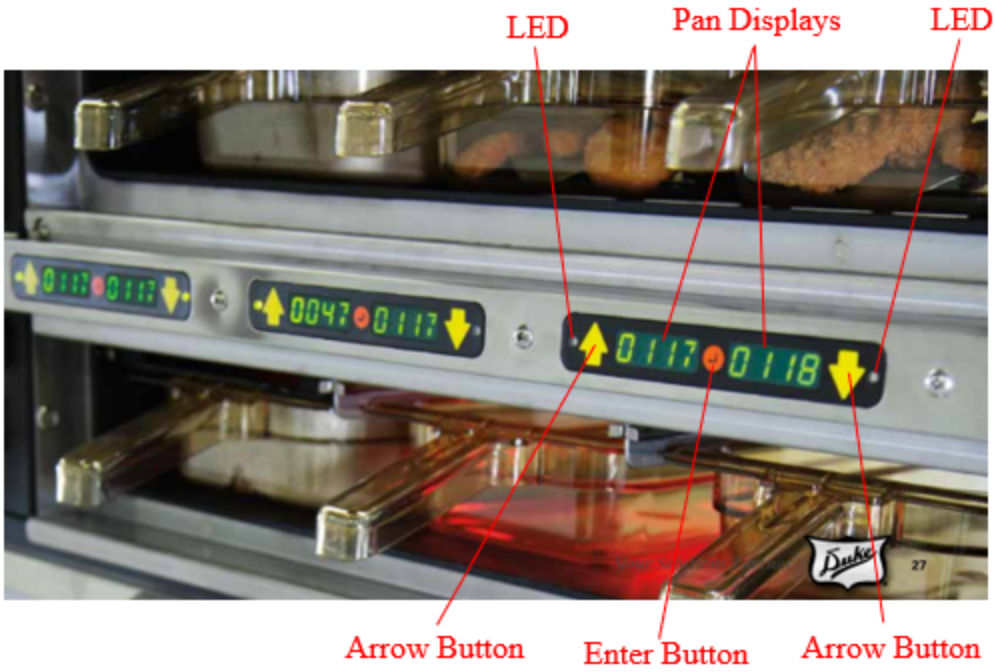


EX1005: 16.



EX1008: 29.

Moreover, the timer bars/bezels have controls (buttons, displays) providing alternative daypart (meal set) selection, changing the food type and thus first temperature setpoint. EX1005: 17; EX1003: ¶¶367-368.

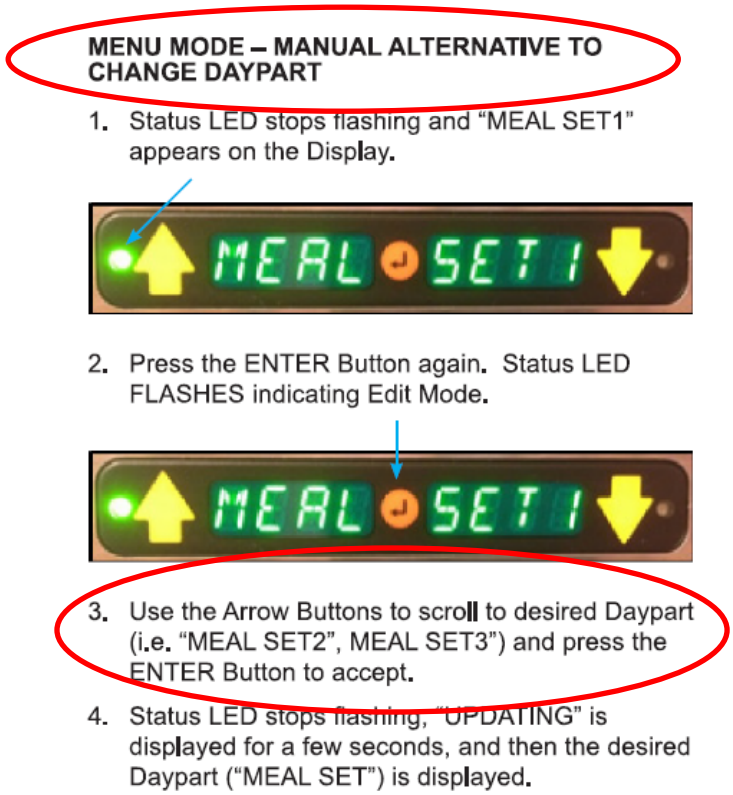


EX1007: 52.

KEYPAD DISPLAYS

The Keypad Displays control and monitor the performance of each heating well. They are located inside of the Menu Bar(s) and the quantity varies (depending on model).

EX1008: 14.



EX1005: 17.

Thus, IRHS24 receives a user input of the first temperature setpoint via daypart button press and/or enter/arrow button press (daypart/meal set selection). EX1003: ¶¶369-370.

N. Claim 17

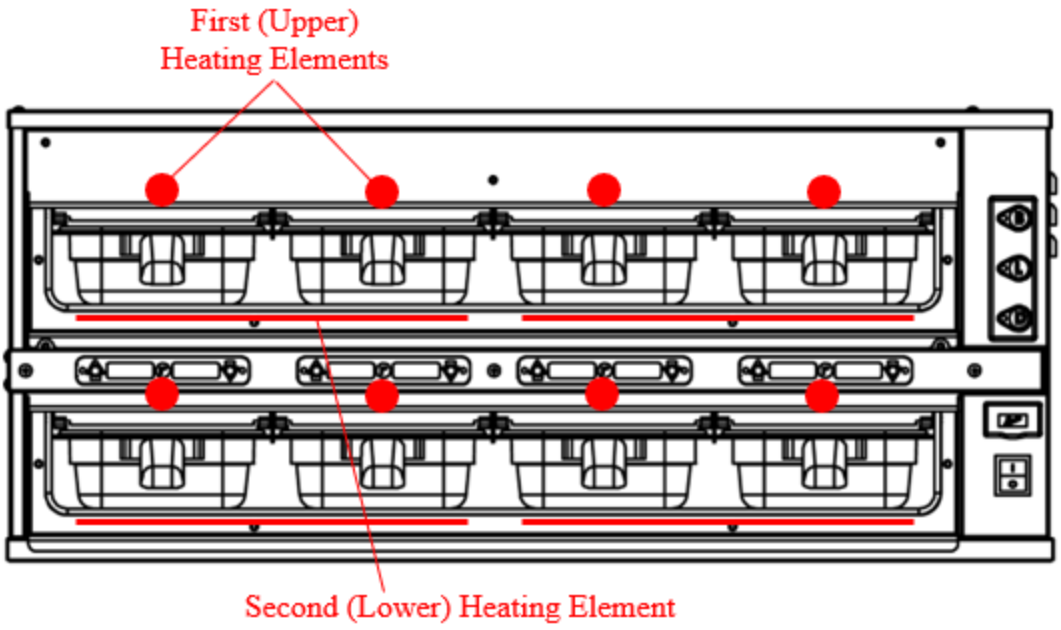
Per Section IV(M), the user input (daypart button press and/or enter/arrow button press (daypart/meal set selection)) is user selection of a food item for the first food holding zone for that daypart/meal set (e.g., Breakfast, Lunch, Dinner). EX1005: 16; EX1008: 54-55; EX1027: ¶[0011]; EX1003: ¶¶371-372.

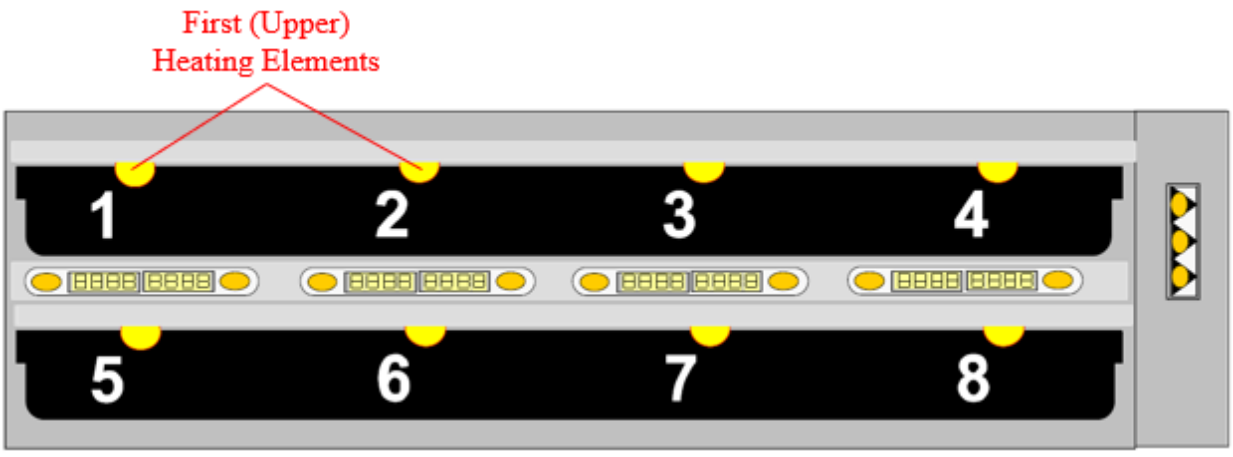
The user selection of the food item is associated with independent operation and control of the first and second elements because, per Section

IV(B)(1.b/1.c/1.d/1.e), the upper and lower elements are operated/controlled independently from each other (IR pulse rate, HeatSink temperature) and other zones' elements for operating the first zone to the first temperature setpoint. EX1005: 16; EX1008: 57; EX1003: ¶¶373-374.

O. Claim 18

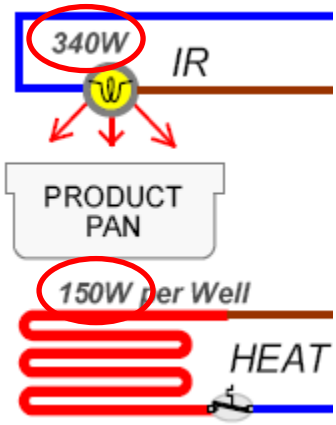
Per Section IV(B)(1.b/1.c/1.d/1.e), the first and second elements are independently controllable from one another. EX1003: ¶¶375-376.





EX1005: 8, 25.

The first element outputs more wattage (340W) than the second element (300W). EX1008: 44, 64; EX1003: ¶377. The first element outputs more heat energy than the second element at least while performing "IR Turbo Boost for [an] instant shot of IR energy" while the second element "provides ***gentle*** heat." EX1006: 1; EX1007: 22; EX1003: ¶¶378-379.



EX1008: 64.

P. Claim 19

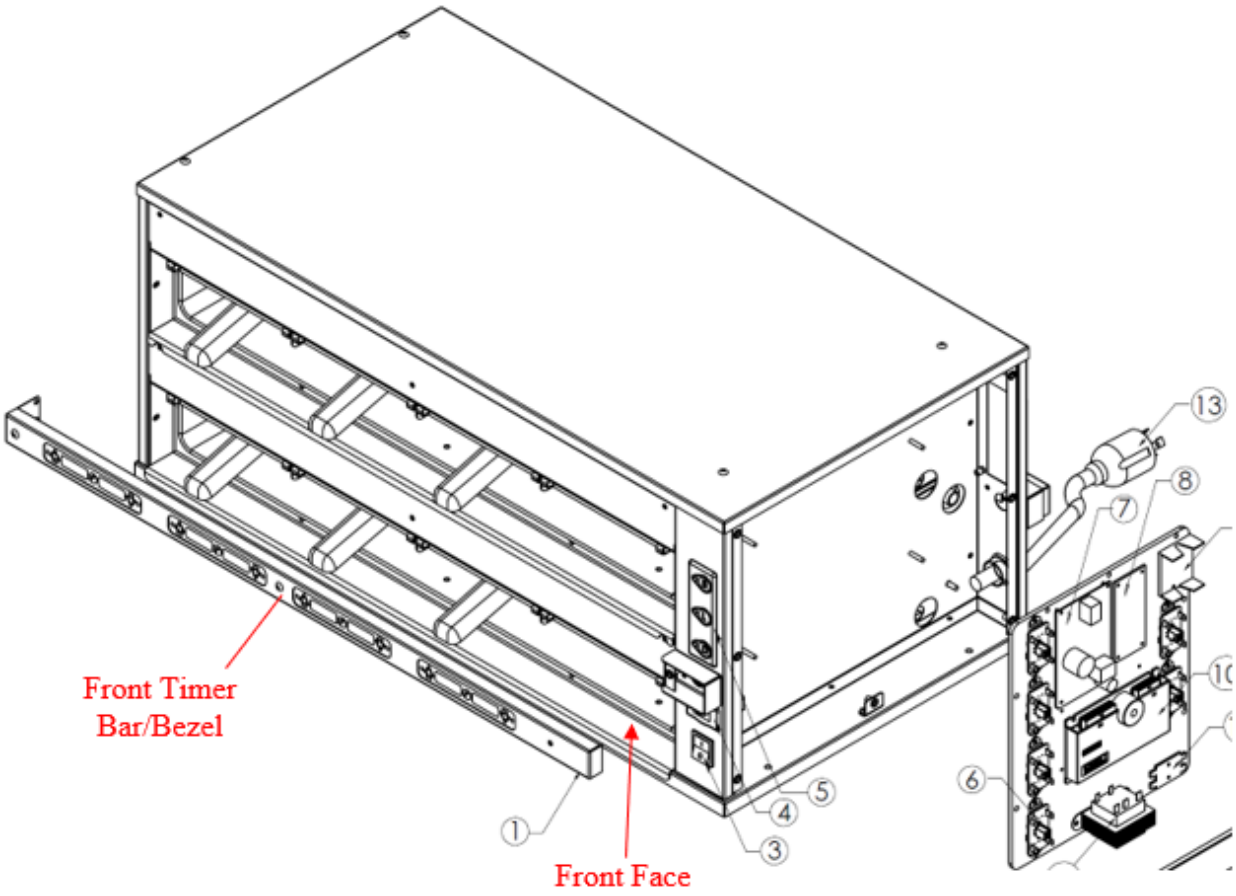
The first IR element is controlled independently from the second element (Section IV(B)(1.b/1.c/1.d/1.e)) and is frequently turned off during operation. EX1007: 53 ("pulsed only when needed"); EX1006: 1; EX1005: 15; EX1008: 50, 57 (15% duty cycle). EX1003: ¶¶380-381.

While the first element is off and the second element on, the second element outputs more heat than the first element. EX1003: ¶¶382-383.

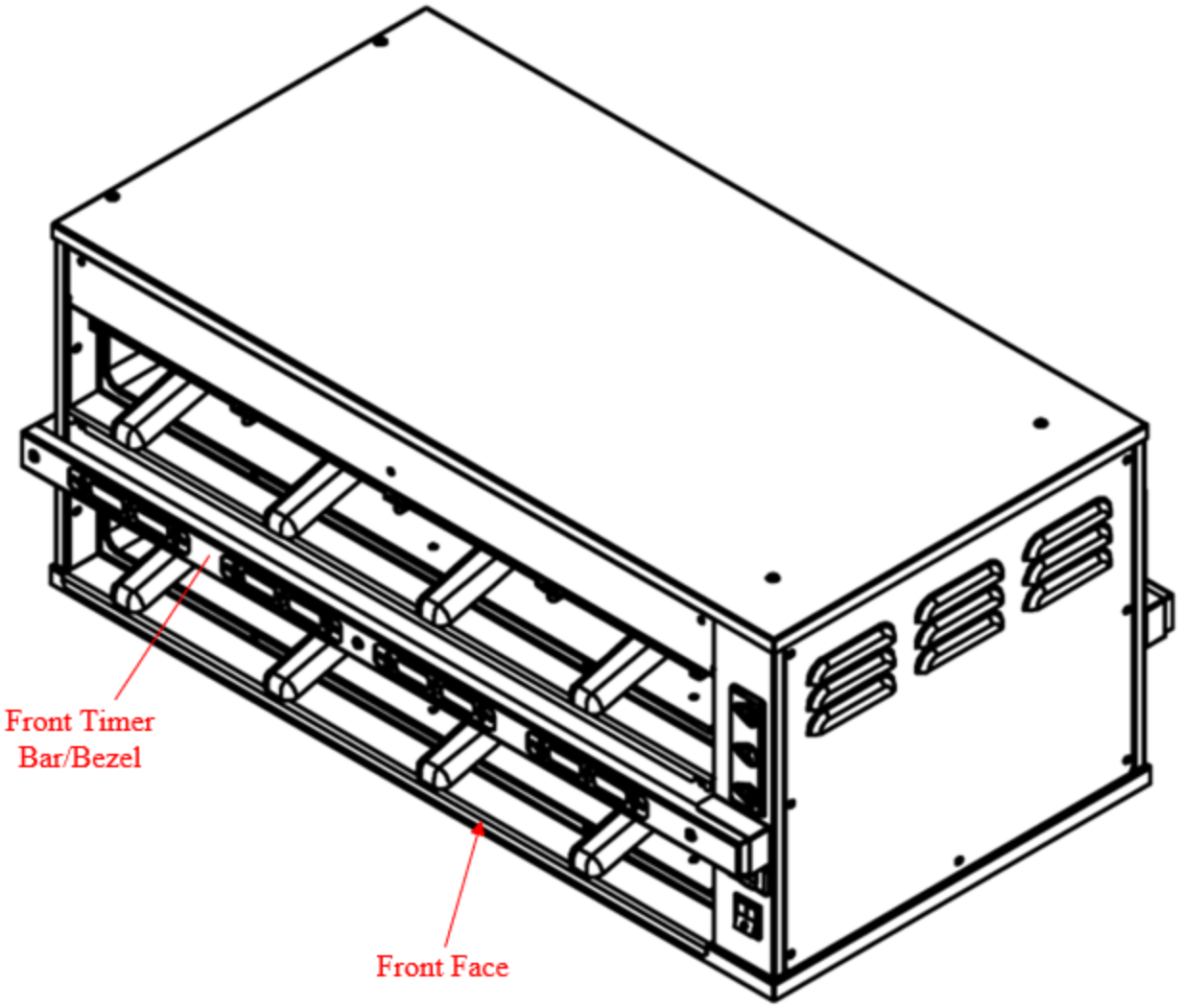
Q. Claim 20:

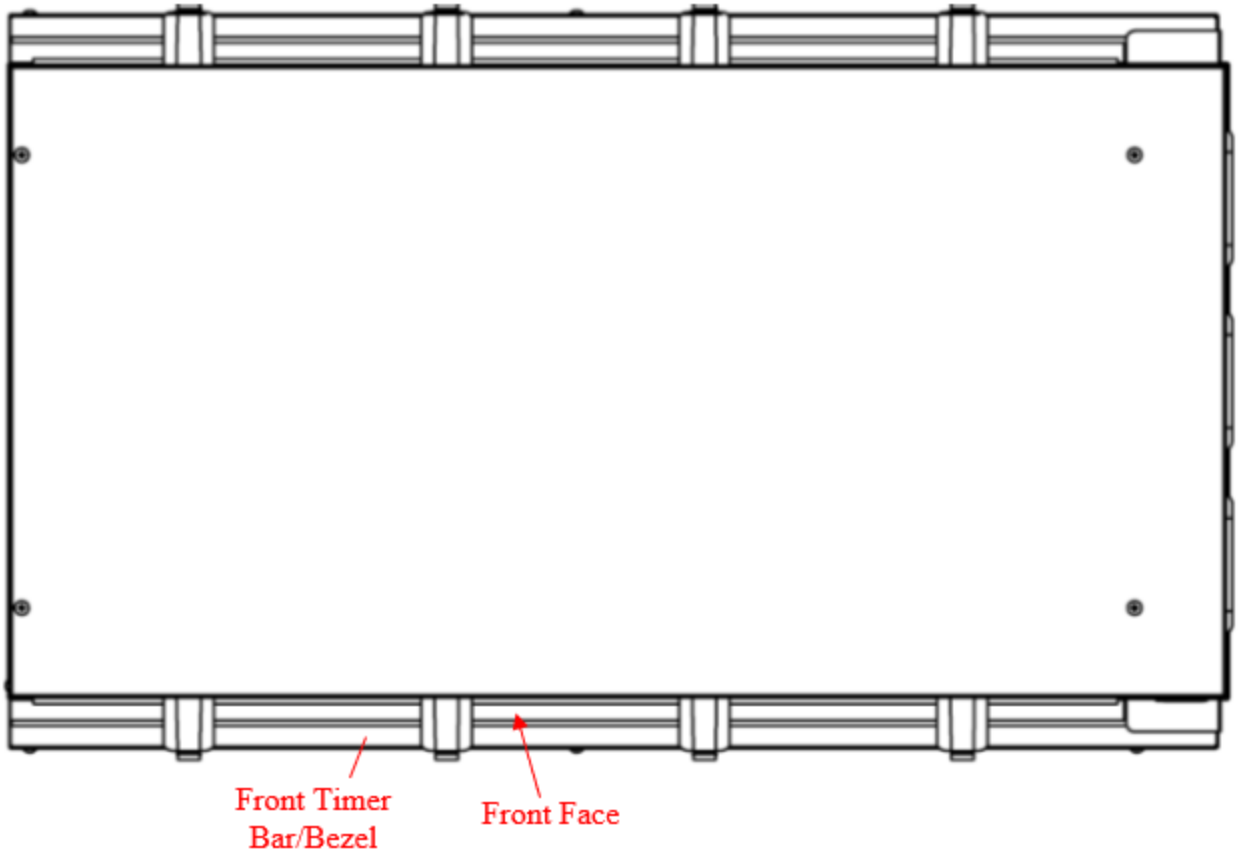
20.a

A front bezel with user interface (controls/buttons and displays) is set forward from the front face. EX1003: ¶¶384-386.

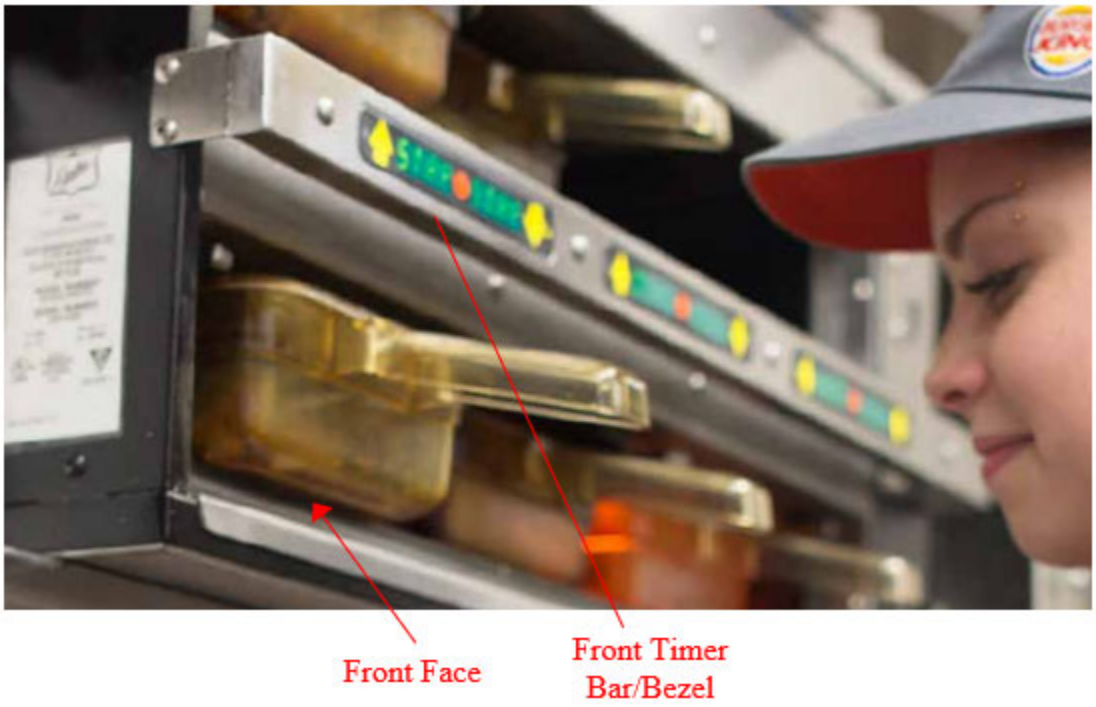


EX1005: 19.

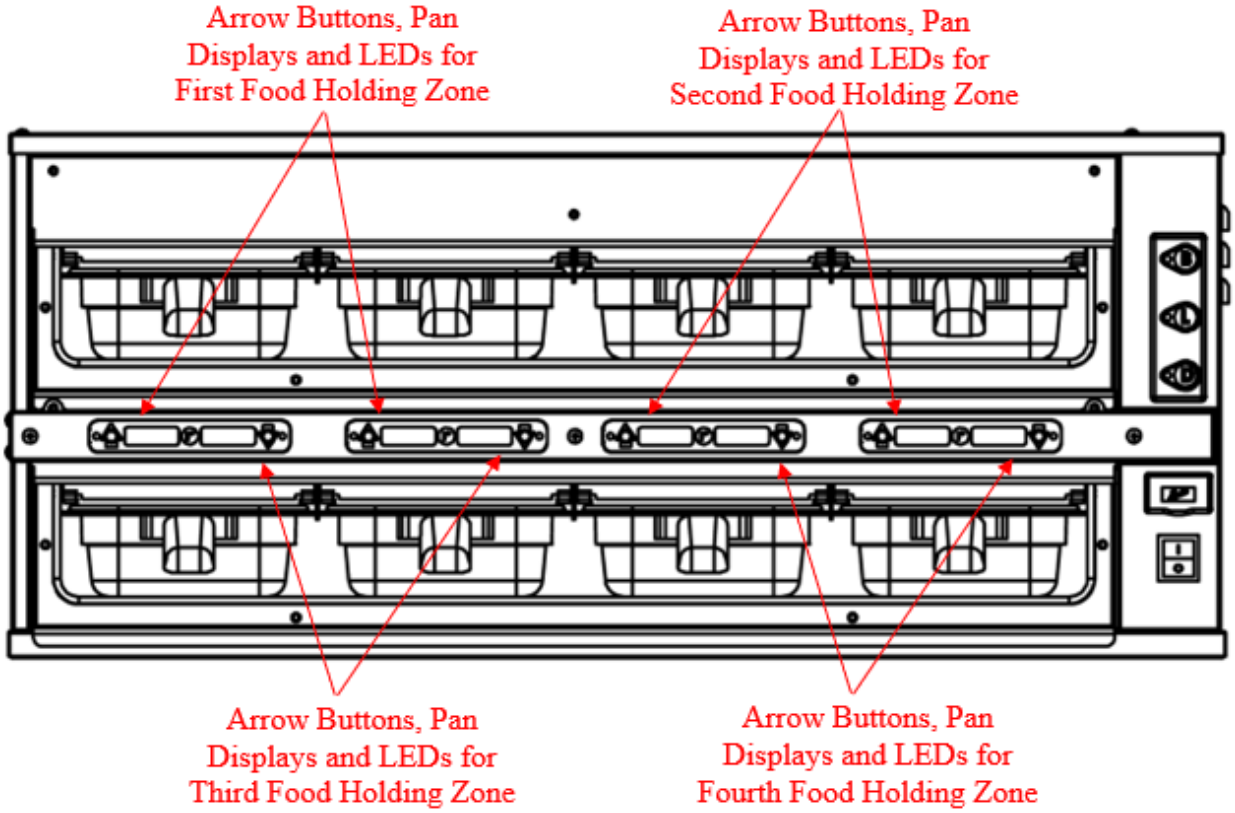

Front Timer
Bar/Bezel
Front Face


Front Timer
Bar/Bezel
Front Face

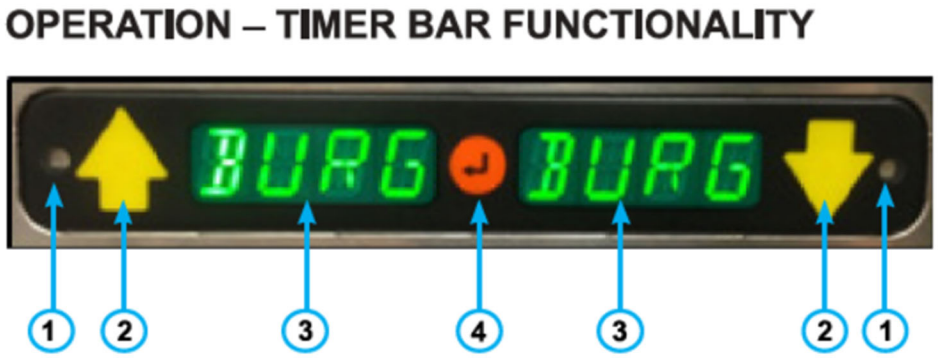
EX1005: 8.


Front Face
Front Timer
Bar/Bezel

EX1007: 28.



EX1005: 8.



2. Arrow Buttons
   a. Used for Starting / Stopping / Resetting Timer.
   b. Used to access MENU MODE.
   c. Indicate which pan the adjacent Status LED and Pan Display are linked to.
3. Pan Display
   a. Displays Product Name and Hold Time Remaining (alternates between the two when Timer is active).
4. Enter Button
   a. Used to access MENU MODE.

EX1005: 16.

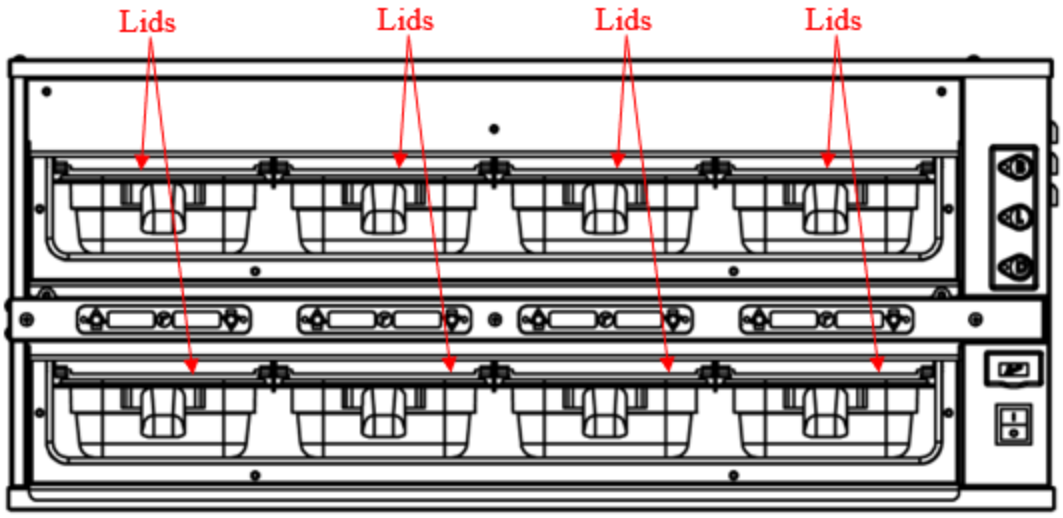
20.b

Per Section IV(M), the user interface receives the user input (enter/arrow button press (daypart/meal set selection)). EX1003: ¶¶387-388.

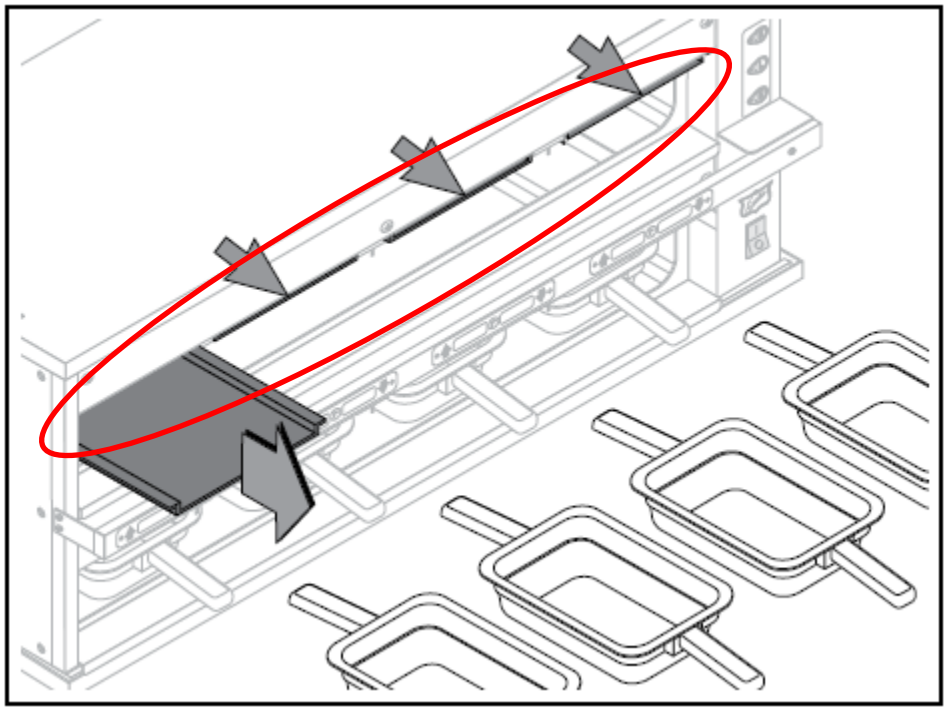
V. GROUND 2: Claims 10 and 13-15 Are Obvious Over the IRHS Documents, Hartfelder, and/or Shei'099

A. Modifications to IRHS Documents per Hartfelder and/or Shei'099

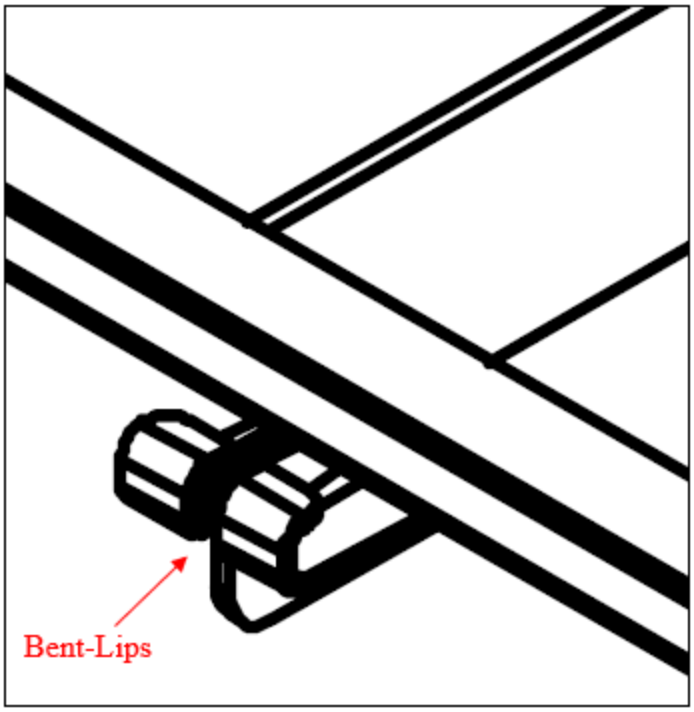
IRHS24 includes lids and bent-lip lid retainers. EX1005: 4, 8, 20-21; EX1007: 53, 56, 58; EX1003: ¶¶389-392.



EX1005: 8.



EX1008: 16.



EX1005: 19 (enlarged).

Hartfelder and Shei'099 stops (61)/(88) retain their lids. EX1013: ¶[0058]; EX1017: 6:9-32; EX1003: ¶¶393-396.

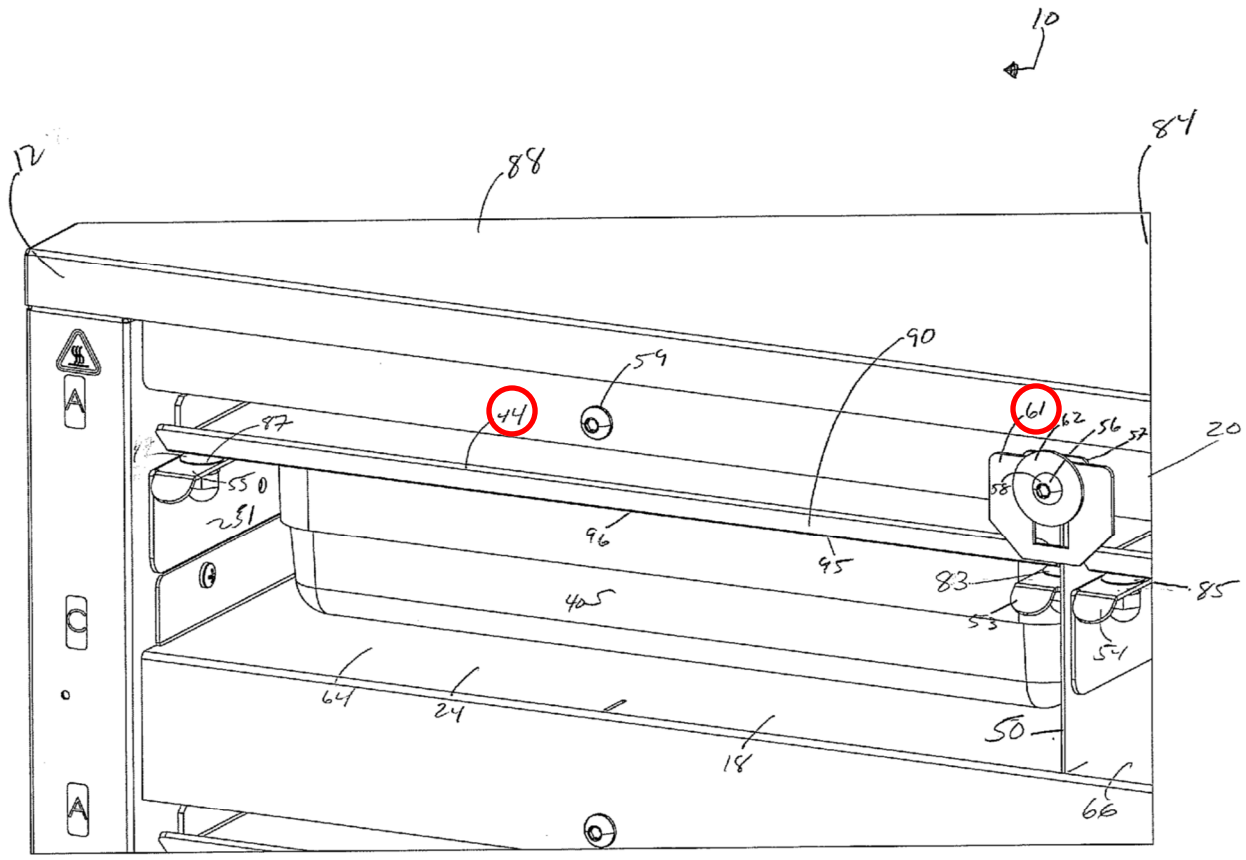


FIGURE 9

EX1013.

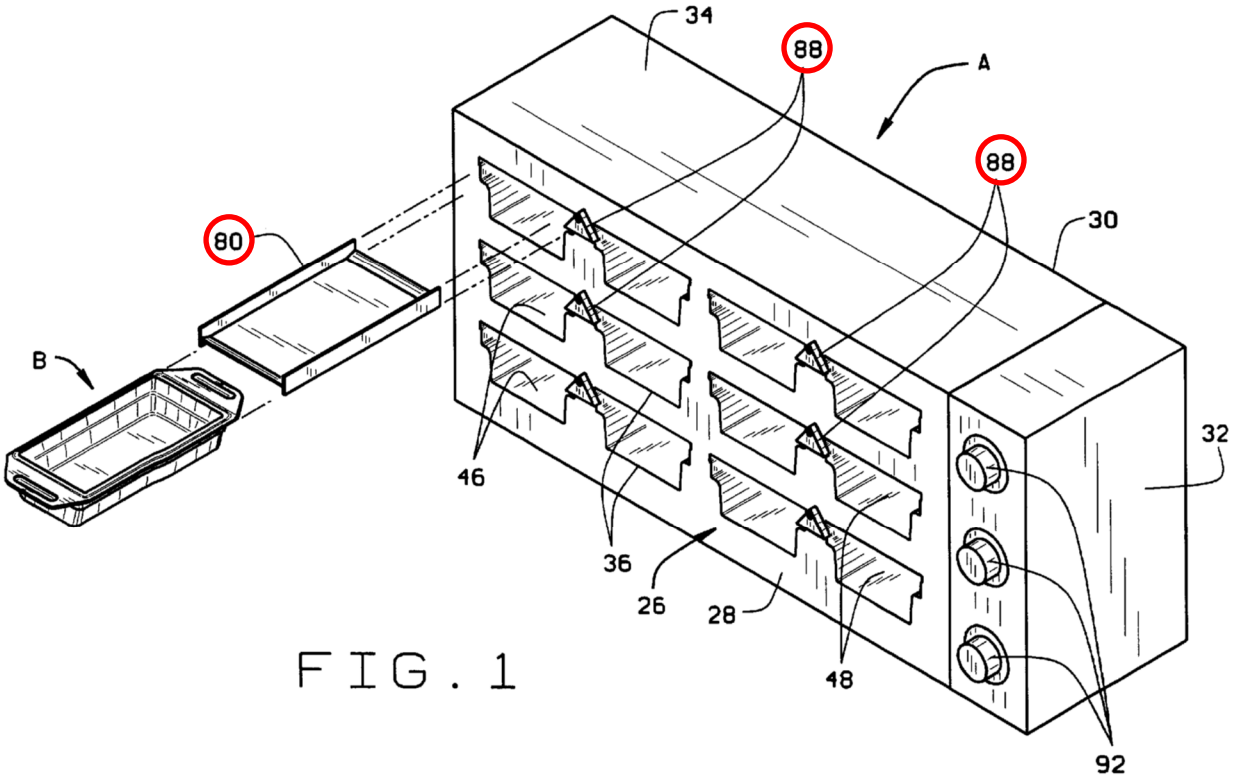
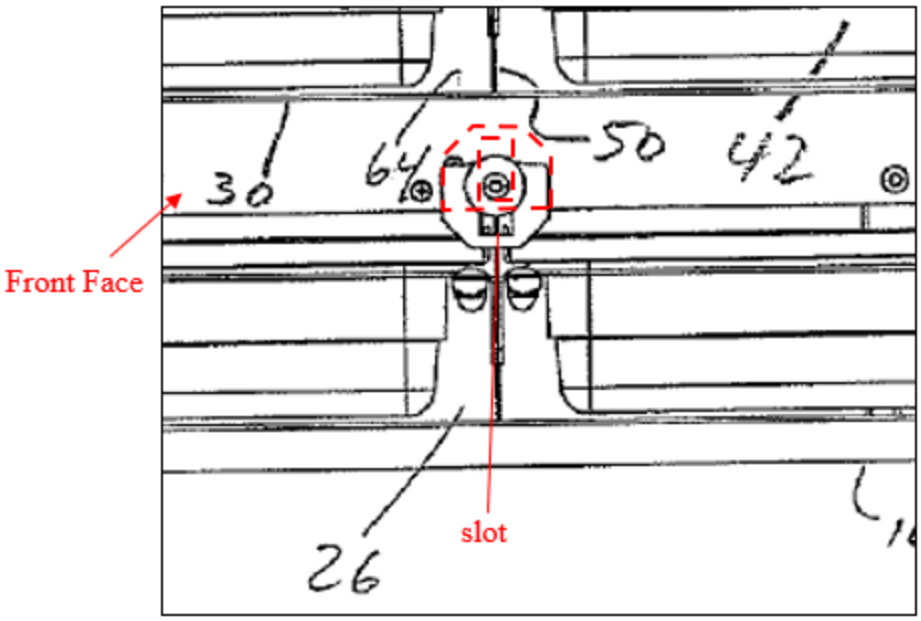


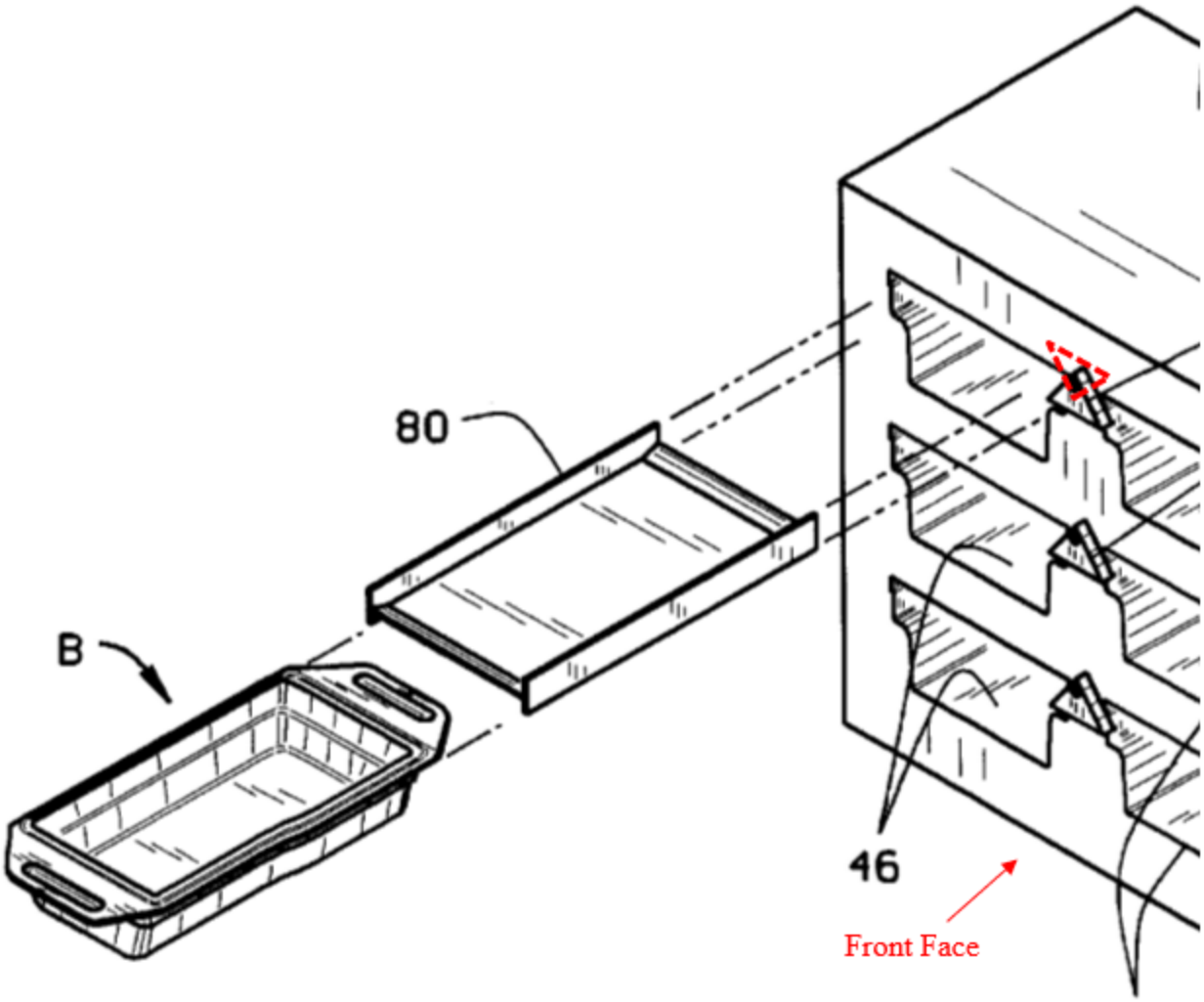
FIG. 1

EX1017.

The stops are secured to the front face and moveable/rotatable between locked/first and unlocked/second (annotated below) positions. EX1013: Fig. 2; EX1017: 6:9-32; EX1016: ¶[0043], Fig. 1; EX1003: ¶¶411-414, 421.



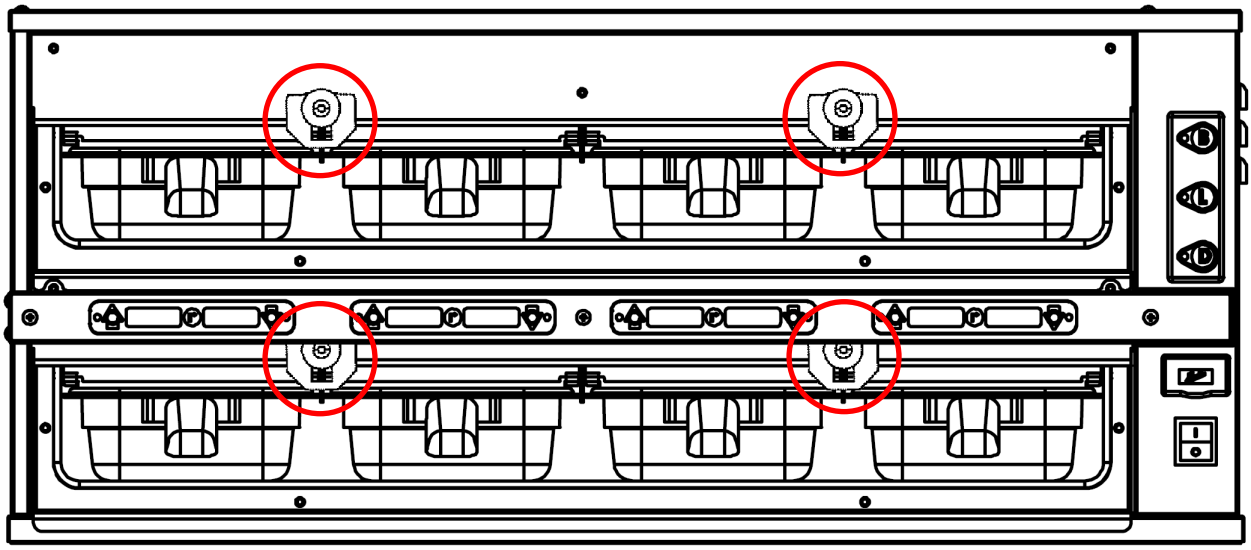
EX1013: Fig. 2 (enlarged).



EX1017: Fig. 1 (enlarged).

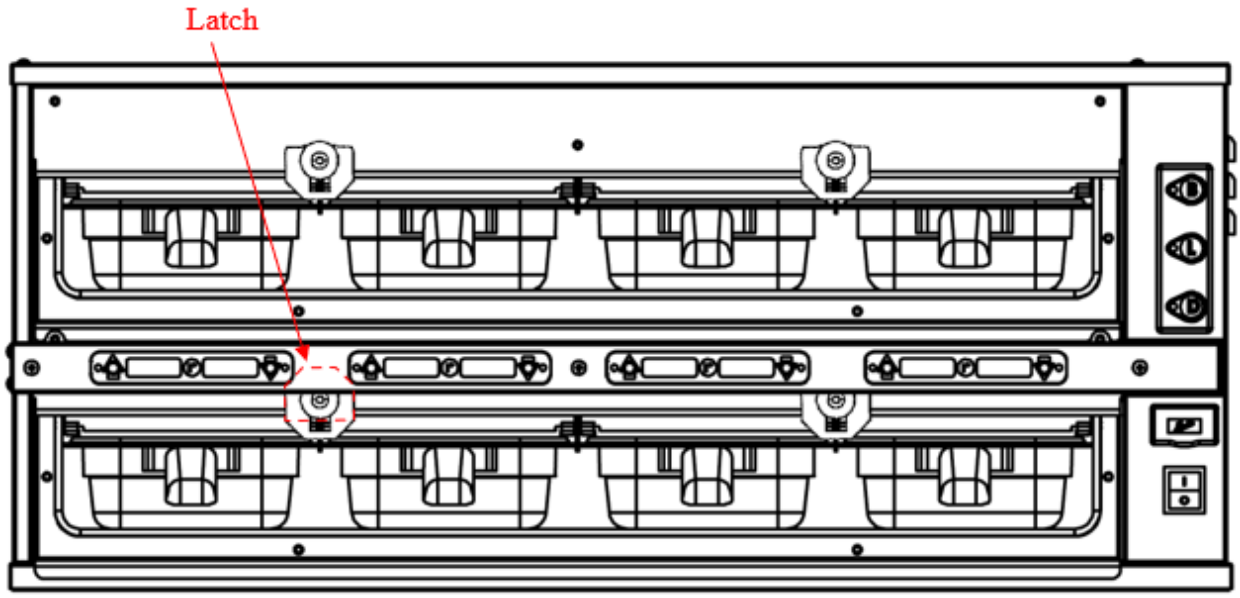
It would have been obvious to modify IRHS24 to include Hartfelder's or Shei'099's stops/latches to prevent inadvertent lid removal/displacement during pan insertion and removal. EX1013: ¶[0058]; EX1017: 6:19-22; EX1003: ¶¶397-398. The stops would replace IRHS's existing bent-lips (easier to clean, manufacture, and/or replace) or be added as backup for them. EX1005: 19, 13-14; EX1017: 7:30-35; EX1011: ¶¶[0035]-[0037], Figs. 9-14; EX1003: ¶¶399-400.

Each stop would be on the face of the chassis/shelf between two lids as in Hartfelder and Shei'099. EX1003: ¶403. IRHS24 including Hartfelder's stops is represented below (Shei'099 would be similar). EX1003: ¶404.



EX1005: 8 (modified).

When locked, the latch/stop would be positioned (via gravity) to block/prevent lid removal. EX1013: ¶[0058]; EX1017: 6:19-21, 29-32; EX1003: ¶¶414, 417. When unlocked, the latch would be rotated (e.g., 45-degrees or 180-degrees) for lid removal. EX1013: Fig. 2; EX1017: 6:9-32; EX1016: ¶[0043], Fig. 1; EX1003: ¶414.



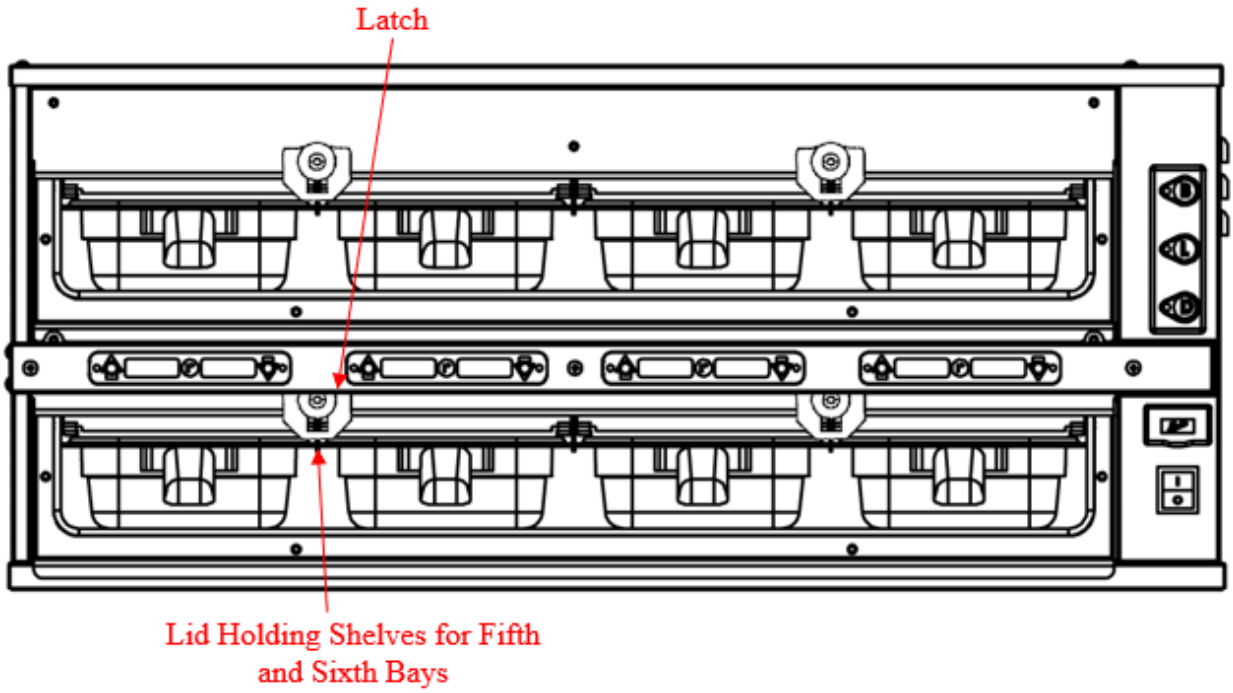
EX1005: 8 (modified).

This uses a known technique (stops to retain lids in place while inserting/removing pans) to improve a similar device (IRHS24) in the same way with predictable results and reasonable expectation of success (stops retaining lids in similar units). EX1013: ¶[0058]; EX1003: ¶¶401-402.

B. Claim 13

13.a

Hartfelder and Shei'099 disclose lid-retaining latches/stops such that it would have been obvious to modify IRHS24 to have latches on the front face associated with lid holding shelves (aligned to retain lids). Section V(A); EX1013: ¶[0058], Figs. 1, 2, 9; EX1017: 6:9-21, Figs. 1-2; EX1003: ¶¶405-408.



EX1005: 8 (modified).

It would have been obvious to position the latches here per Hartfelder and/or Shei'099—positioned adjacent the openings and lids to engage and retain the lids (even with bezel (76)). EX1013: Figs. 1-5, 9, ¶[0039]; EX1003: ¶¶409-410.

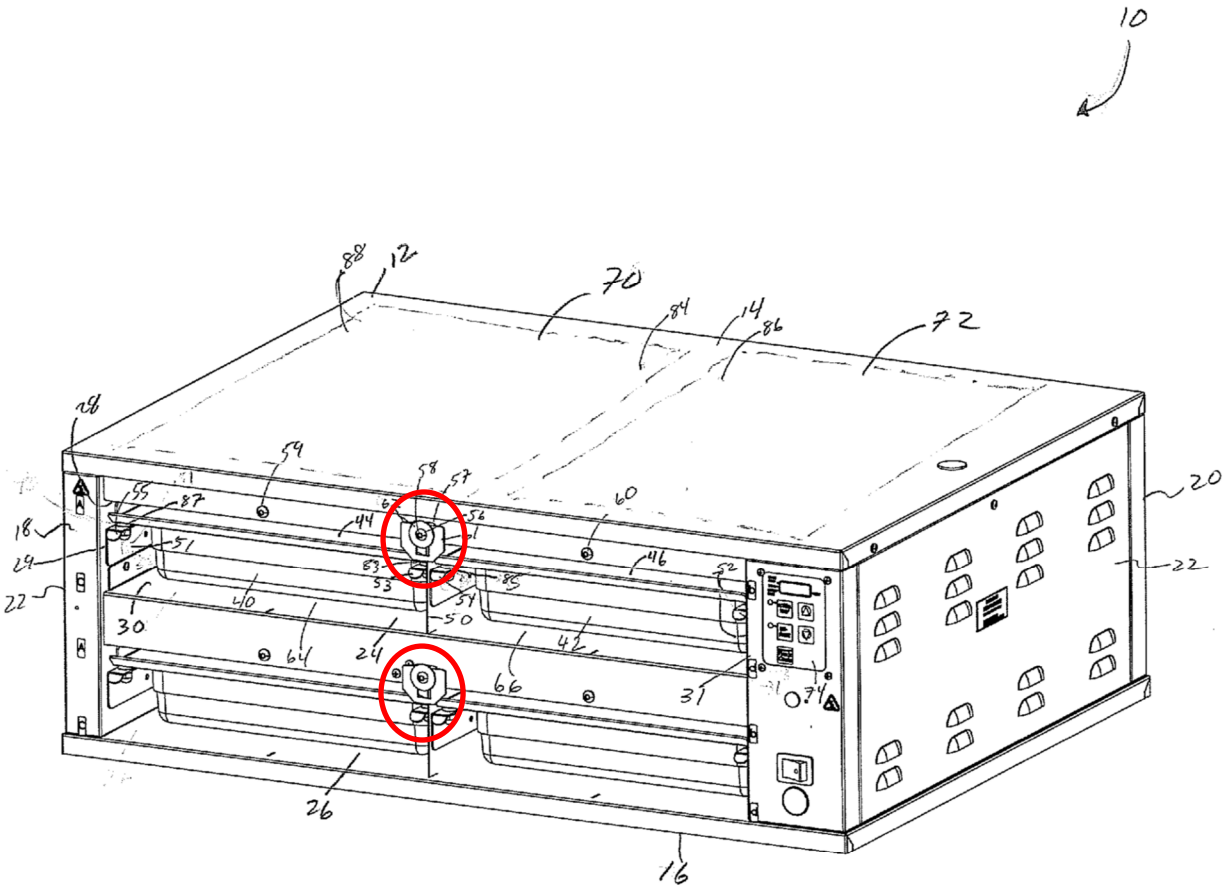

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FIGURE 1

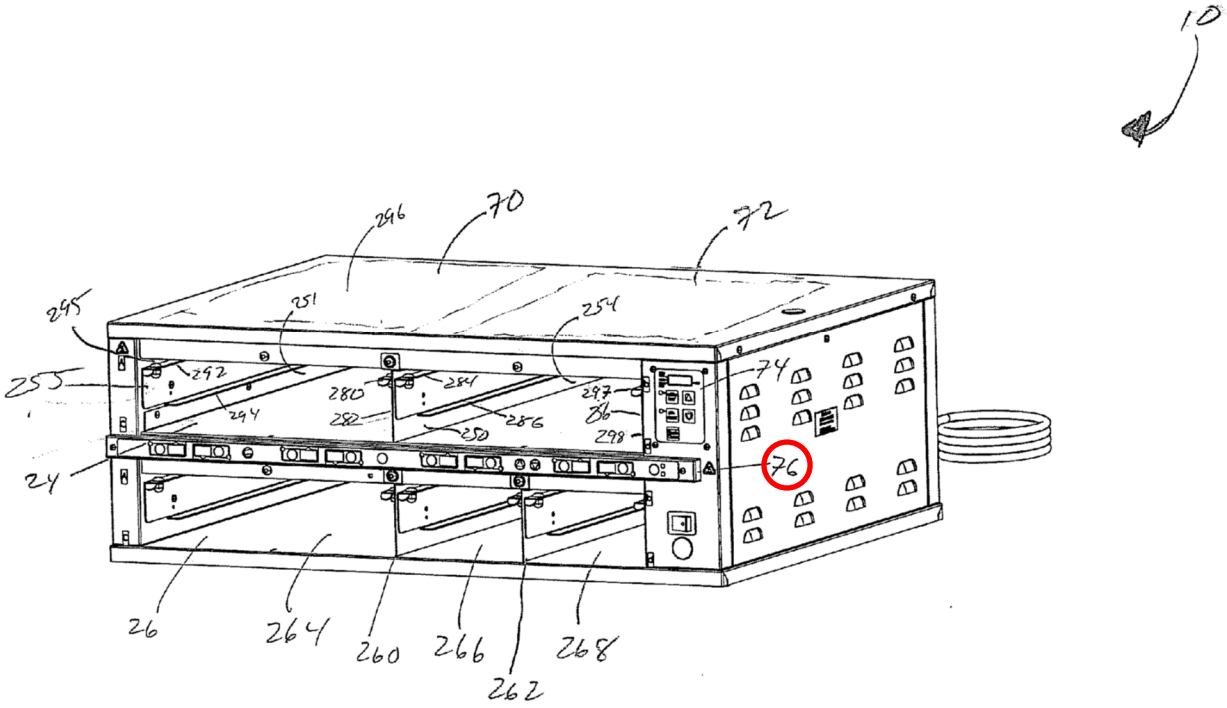

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FIGURE 3

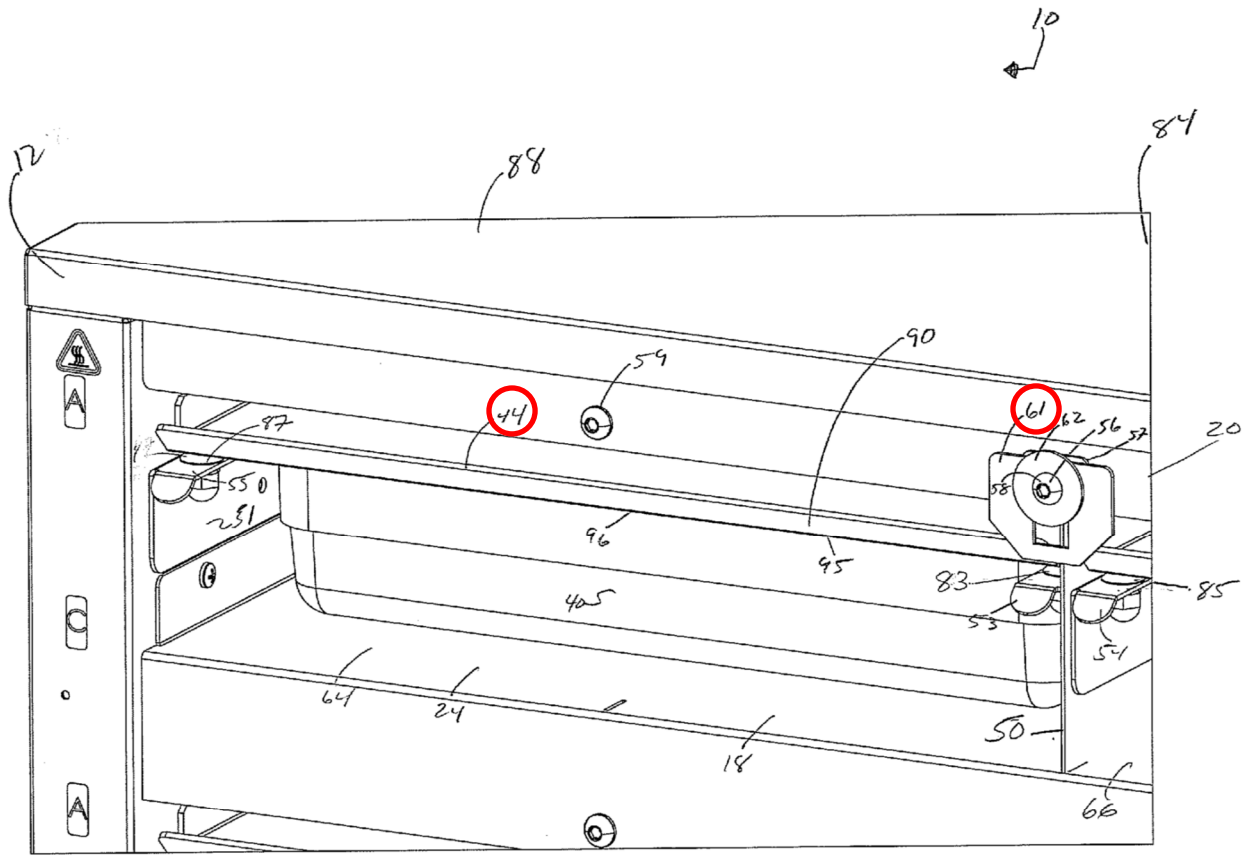


FIGURE 9

EX1013.

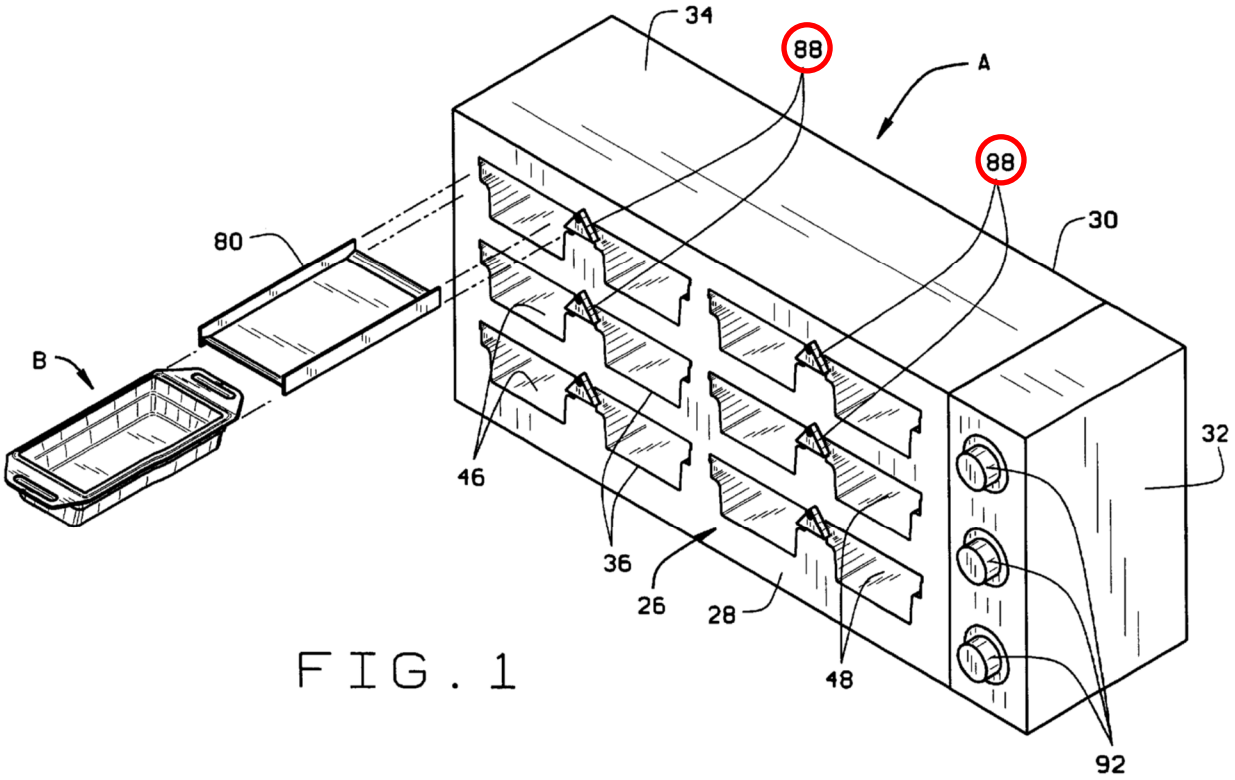
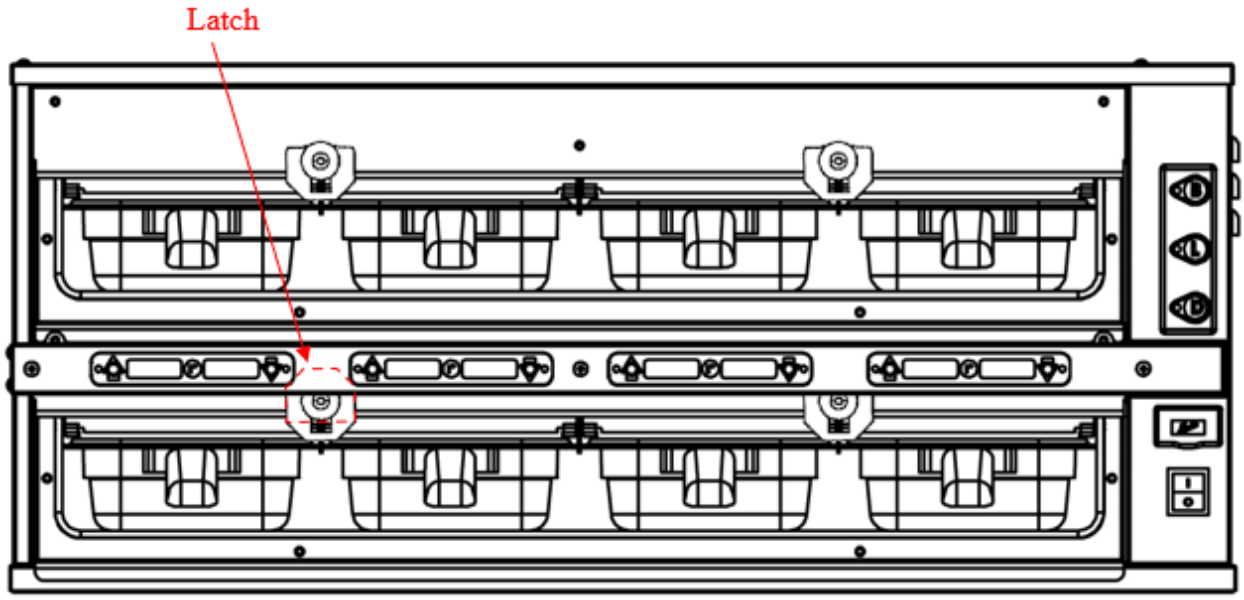


FIG. 1

EX1017.

13.b

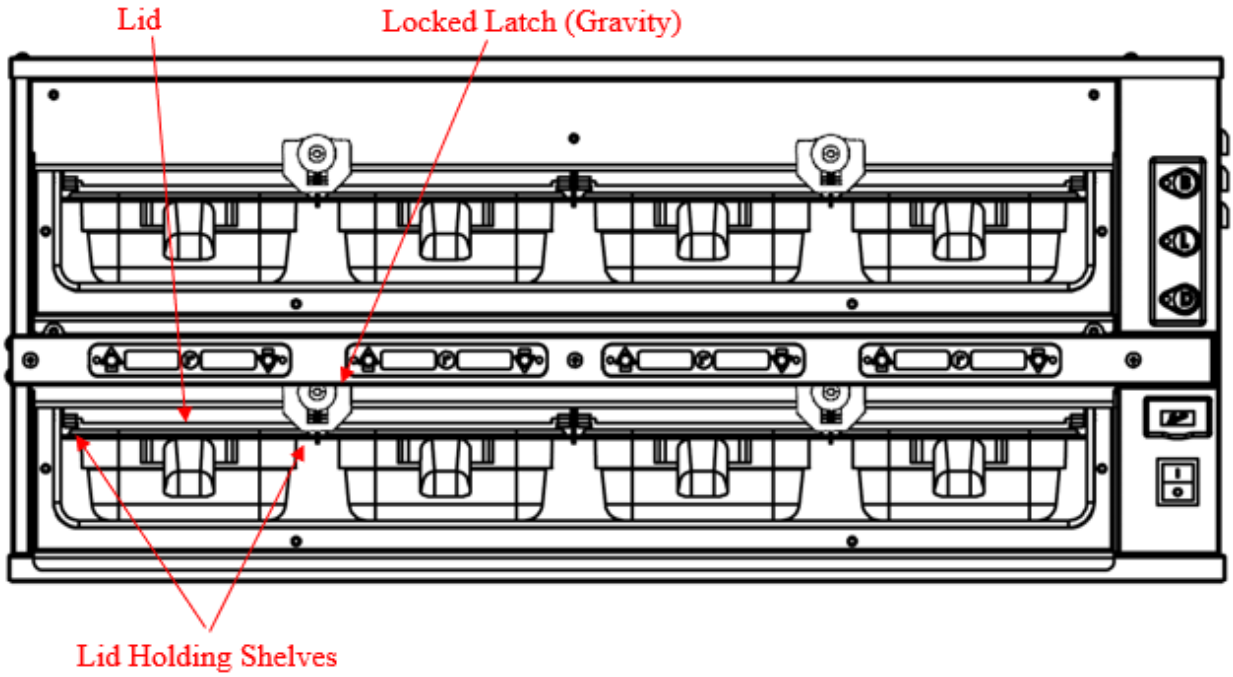
Per Section V(A), the added latches would be moveably secured to IRHS24's front face. EX1013: Fig. 2; EX1017: 6:9-32; EX1003: ¶¶411-415.



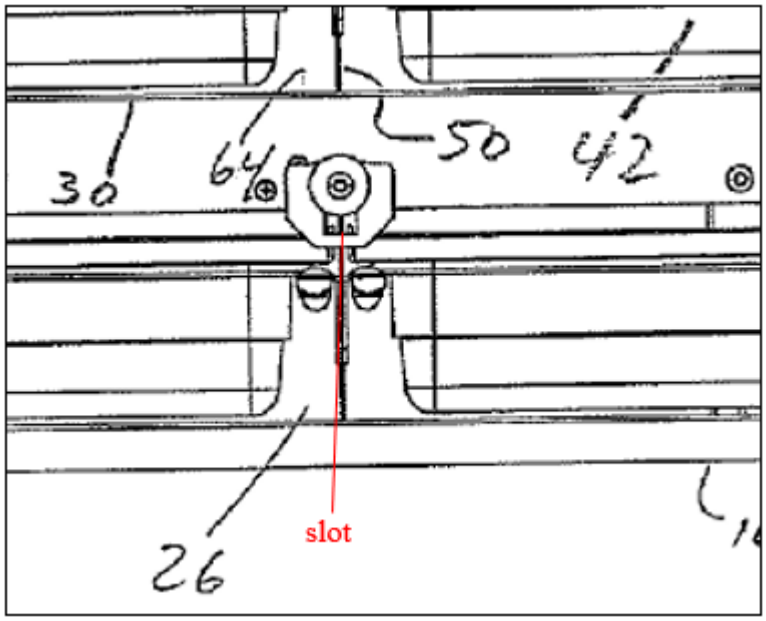
EX1005: 8 (modified).

C. Claim 14

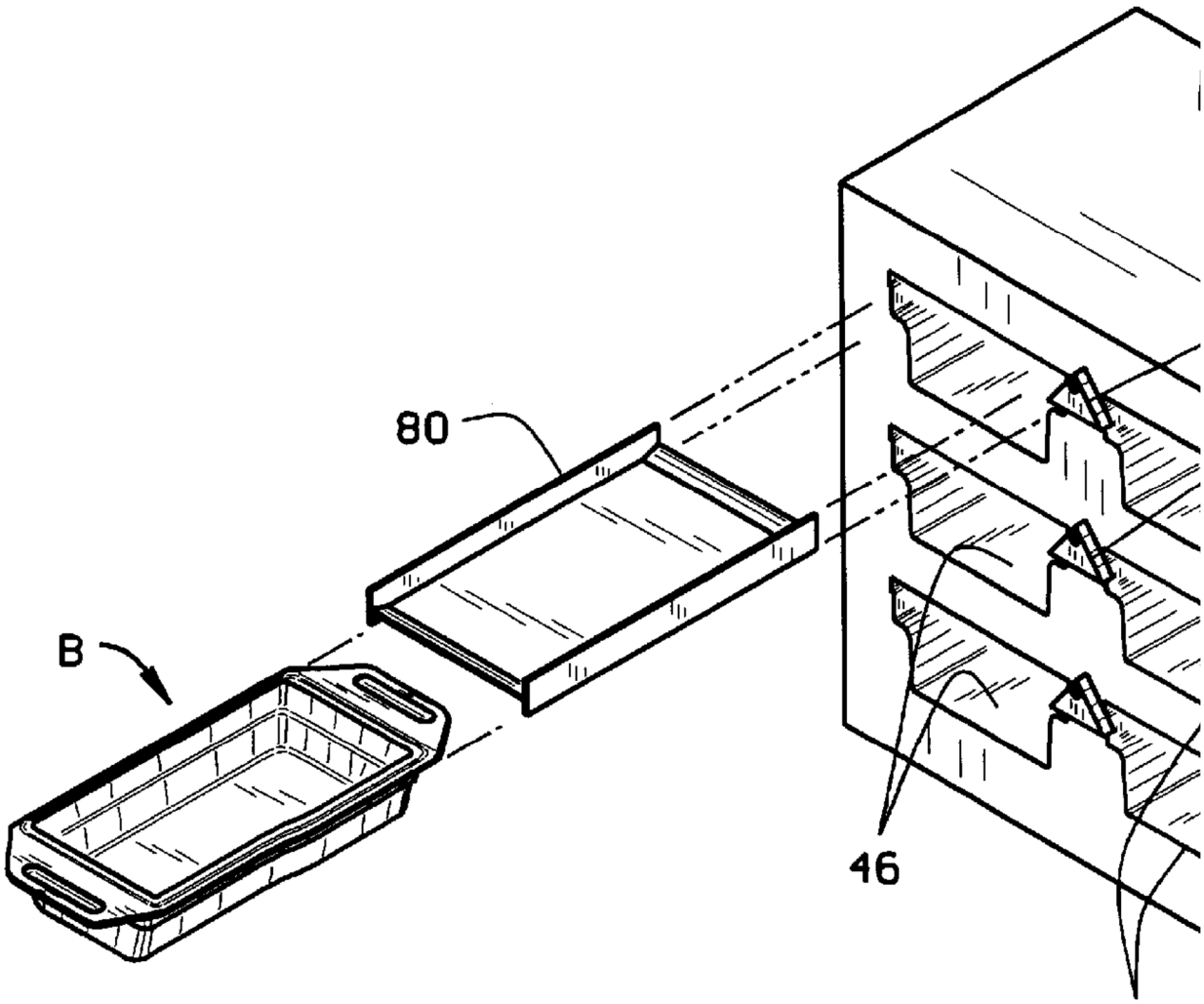
Per Section V(A), Hartfelder, and/or Shei'099, the latches added to the IRHS24 would be gravity-biased (latch's center of gravity below fastener) into the locked position (retaining lid on lid holding shelf). EX1013: Figs. 2, 9; EX1017: 6:29-32, Fig. 1; EX1016: ¶[0043], Fig. 1; EX1003: ¶¶416-418.



EX1005: 8 (modified).



EX1013: Fig. 2 (enlarged).

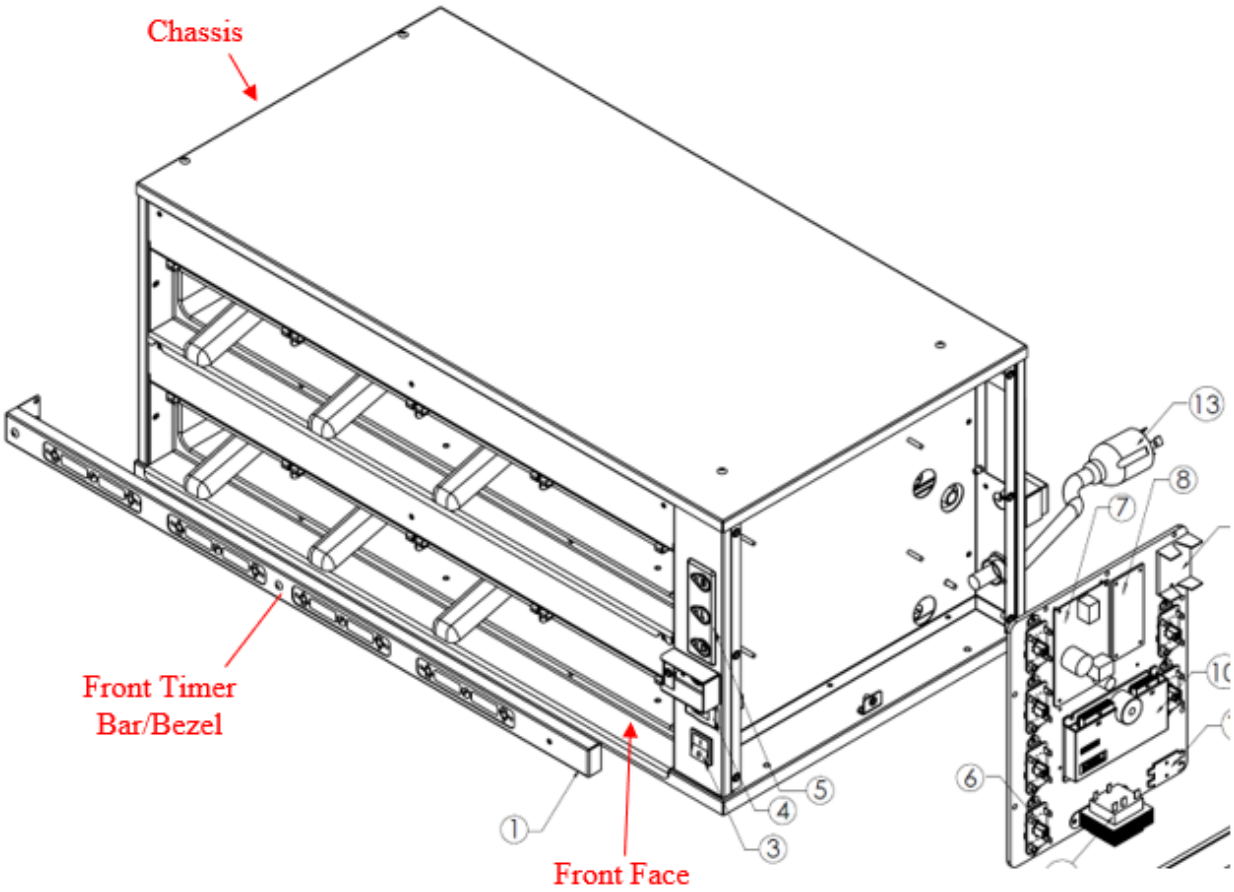


EX1017: Fig. 1 (enlarged).

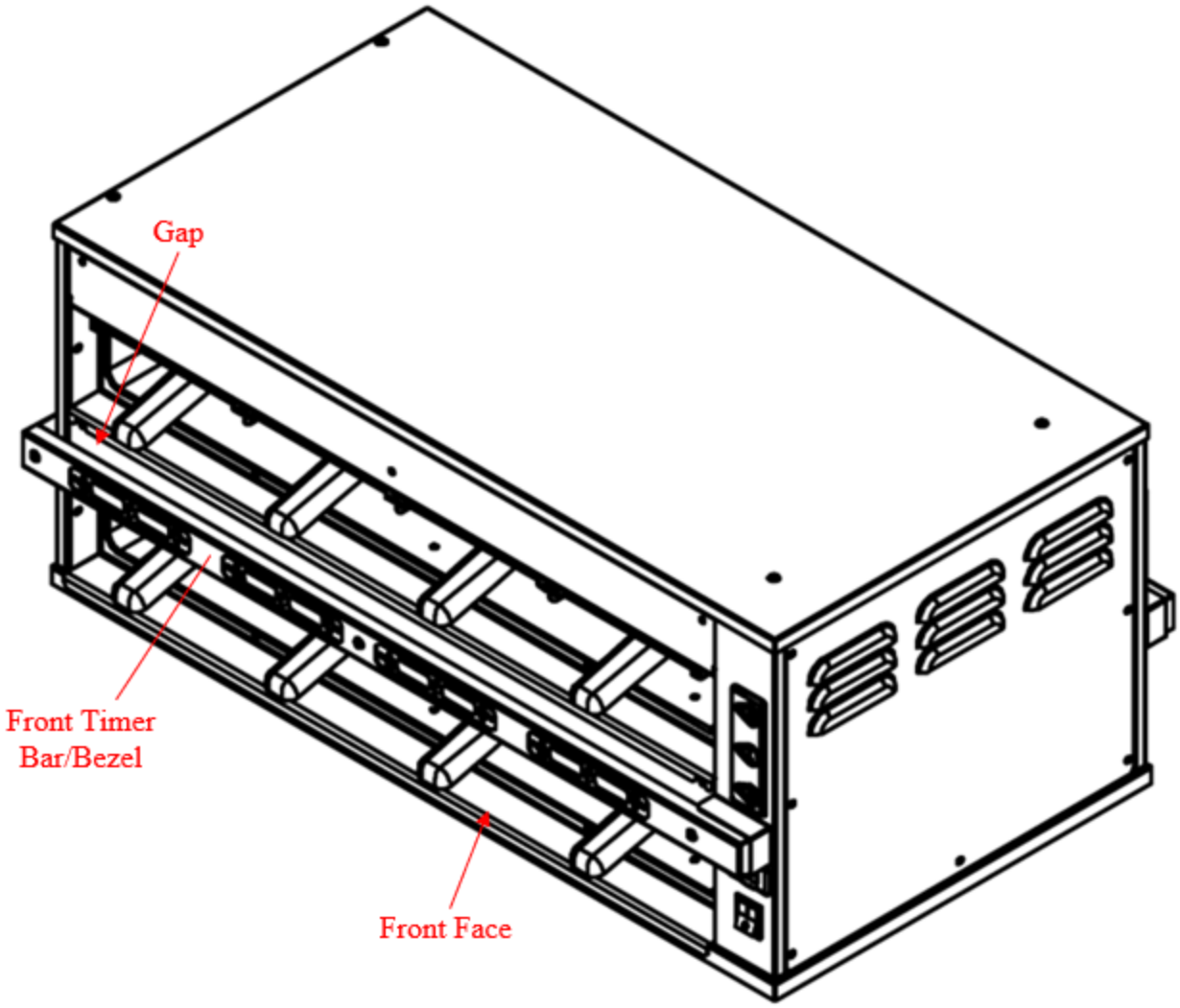
D. Claim 15

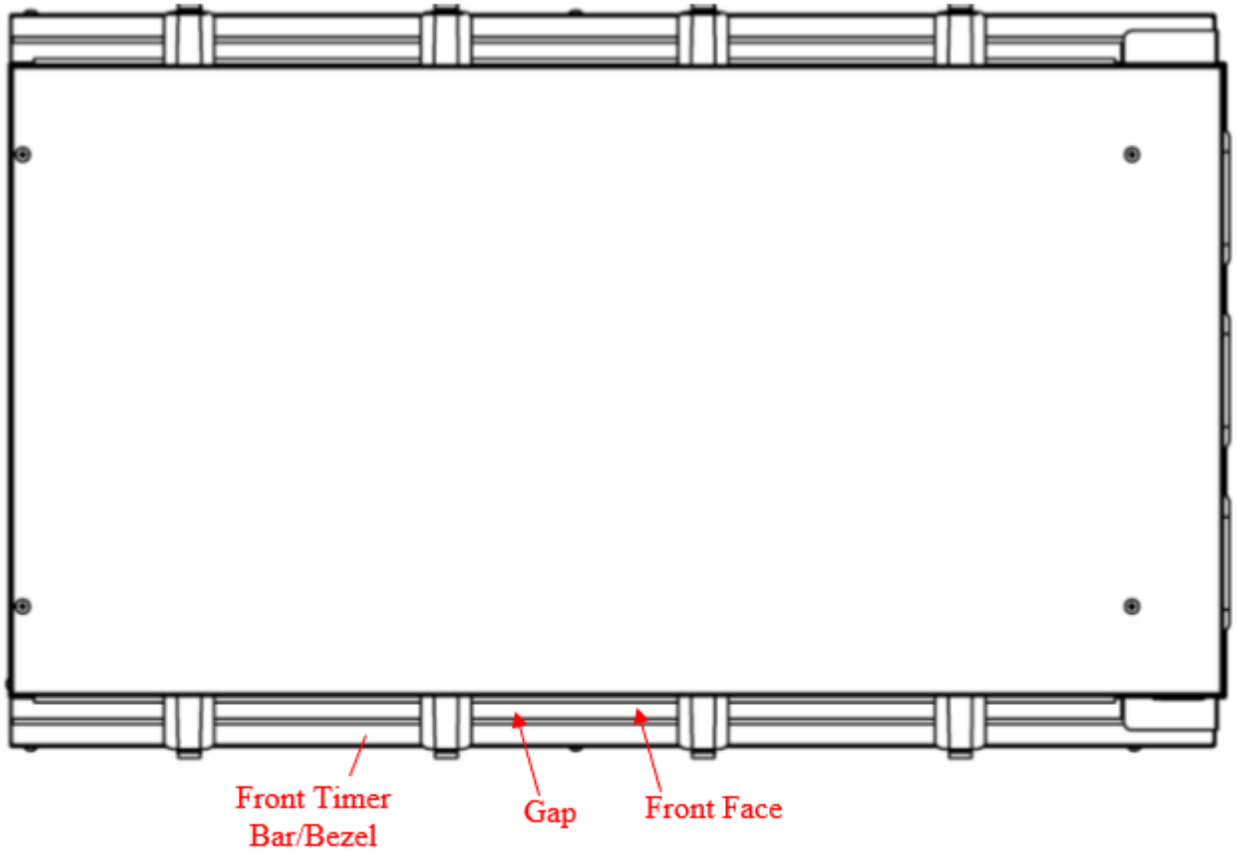
15.a

The front timer bar/bezel is set forward from the front face forming a gap therebetween. EX1003: ¶¶419-420.

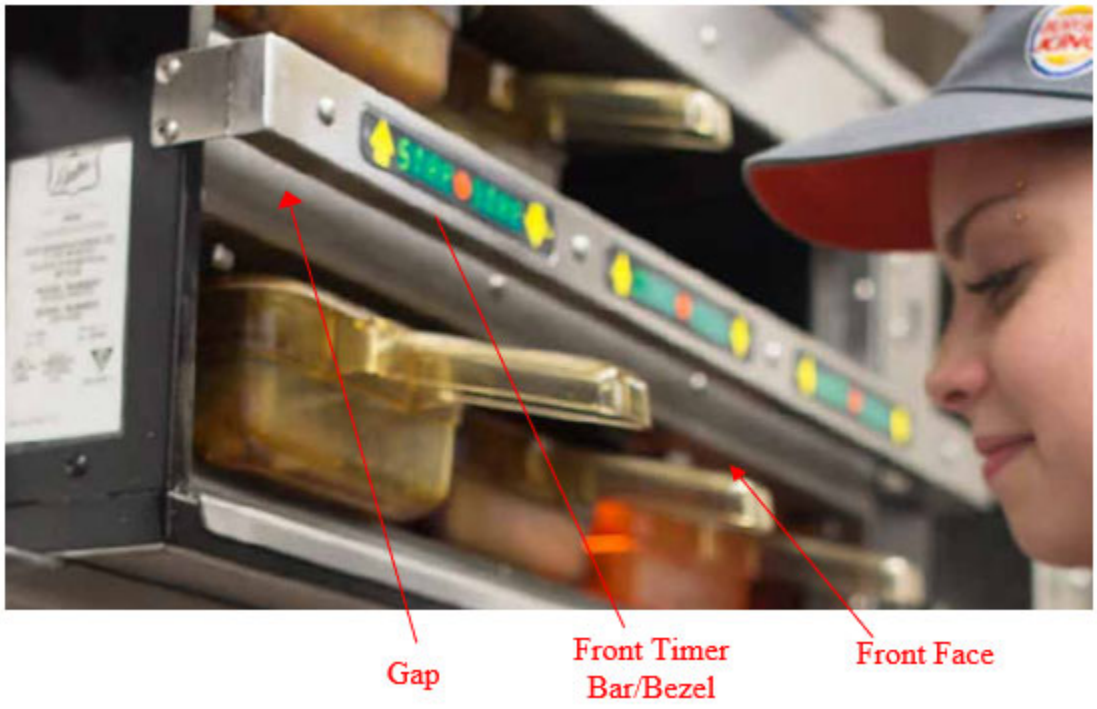


EX1005: 19.


Gap
Front Timer
Bar/Bezel
Front Face


Front Timer
Bar/Bezel
Gap
Front Face

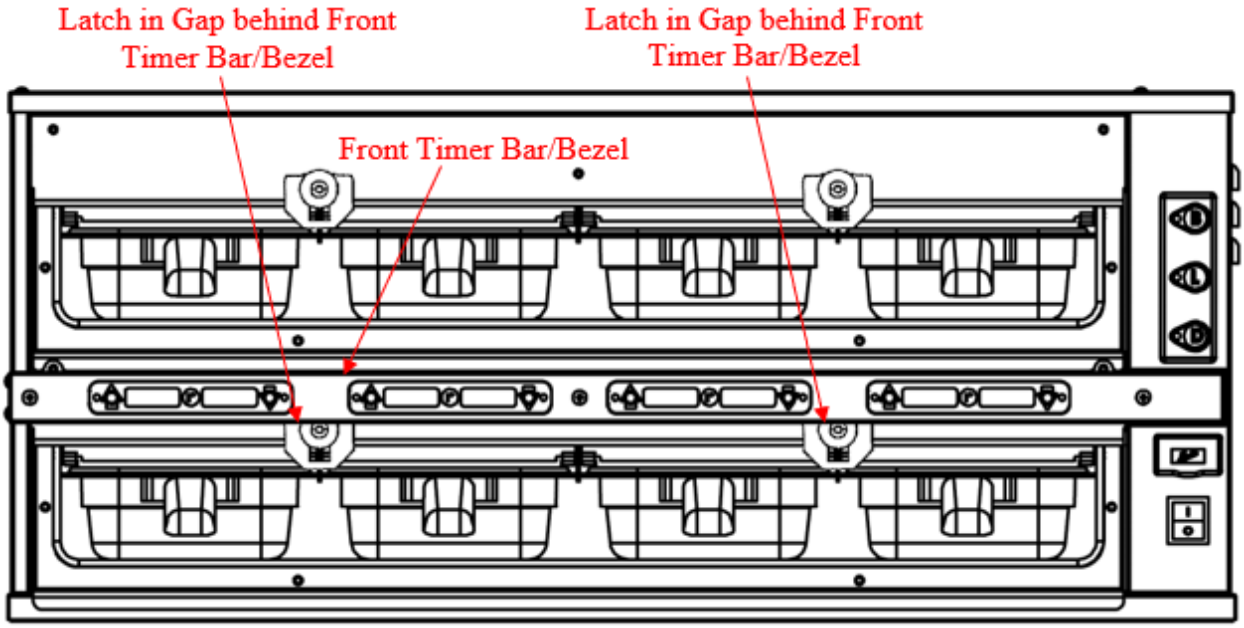
EX1005: 8.


Gap
Front Timer
Bar/Bezel
Front Face

EX1007: 28.

15.b

Per Section V(A), Hartfelder, and/or Shei'099, the stops/latches would be in the gap between the front timer bar and front face/shelf. EX1003: ¶421.



EX1005: 8 (modified).

It would have been obvious to position the latches here per Hartfelder and/or Shei'099—positioned adjacent the openings and lids, and thus to engage and retain the lids (even with bezel (76)). EX1013: Figs. 1-5, 9, ¶[0039]; EX1003: ¶¶422-423.

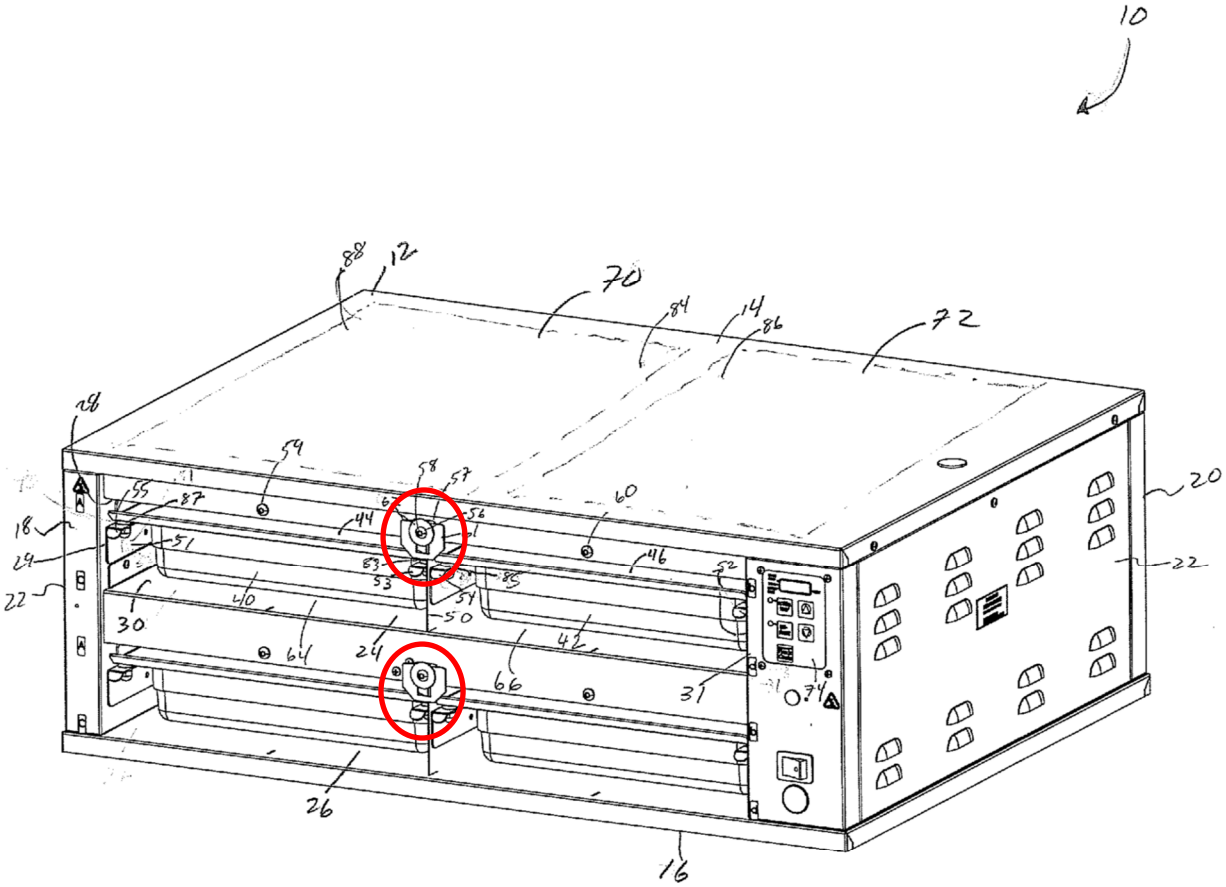
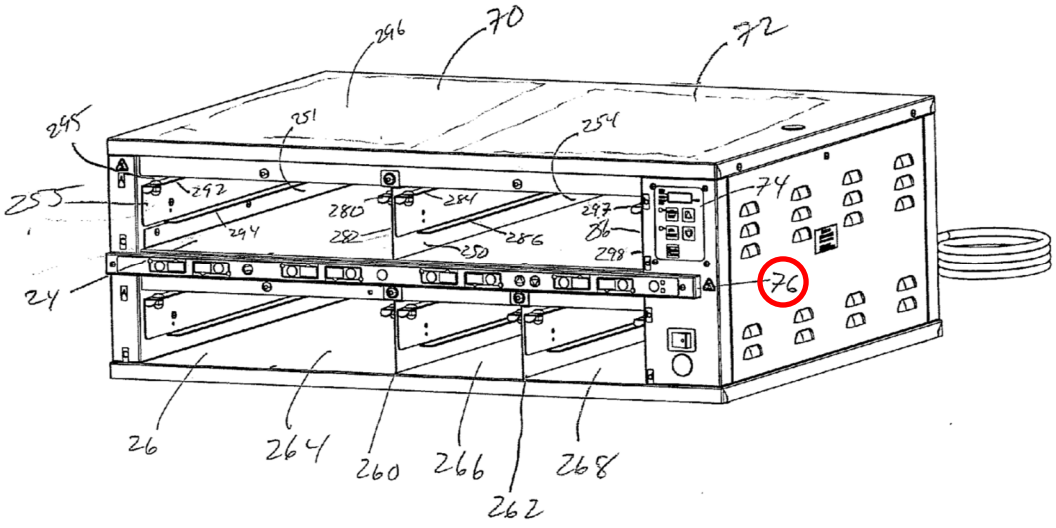

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FIGURE 1


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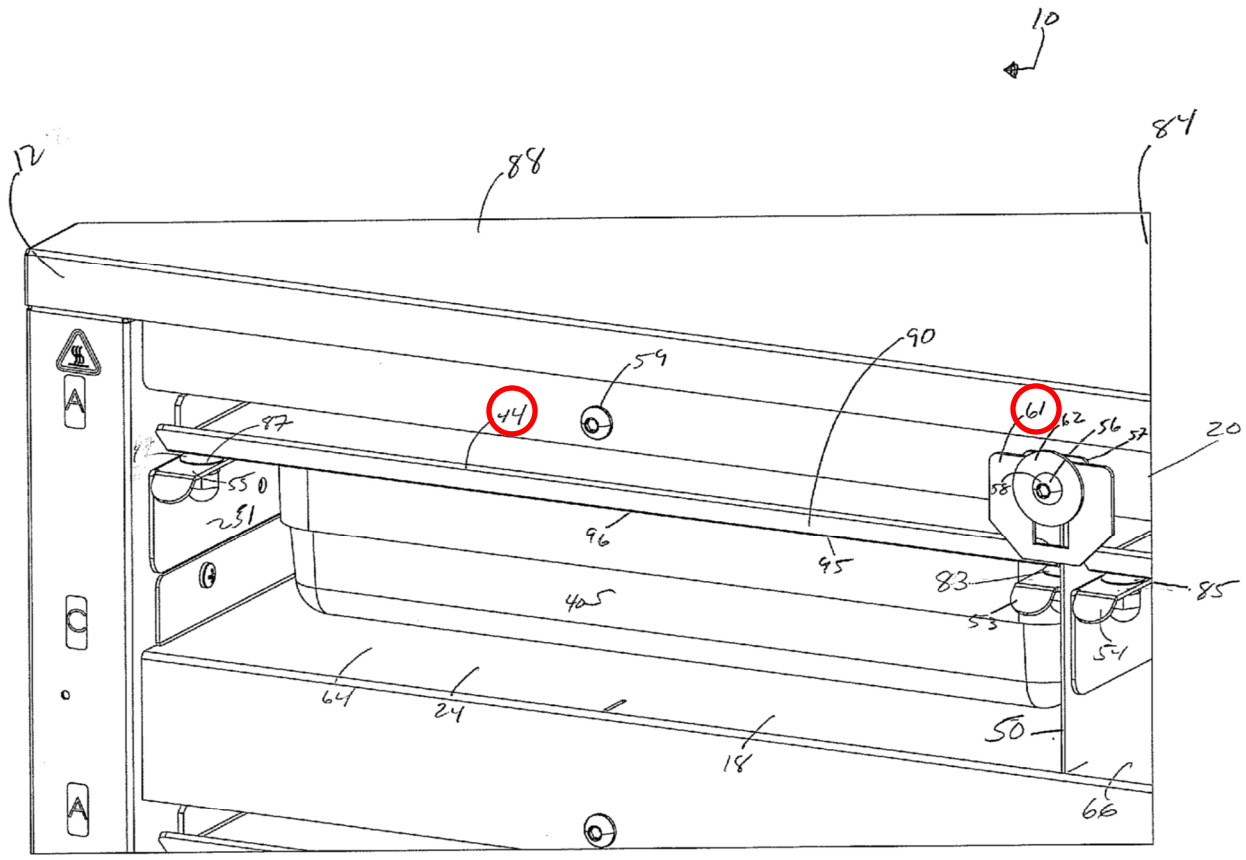


FIGURE 9

EX1013: Figs. 1, 3, 9.

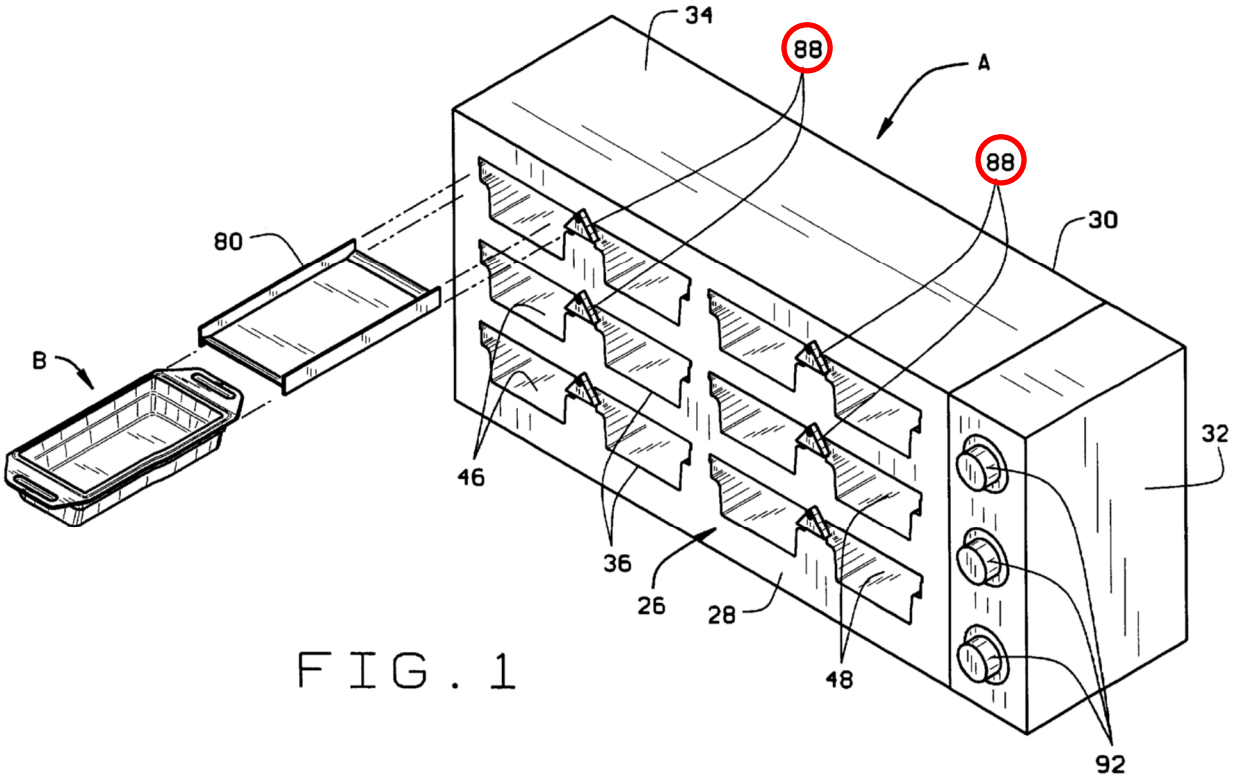
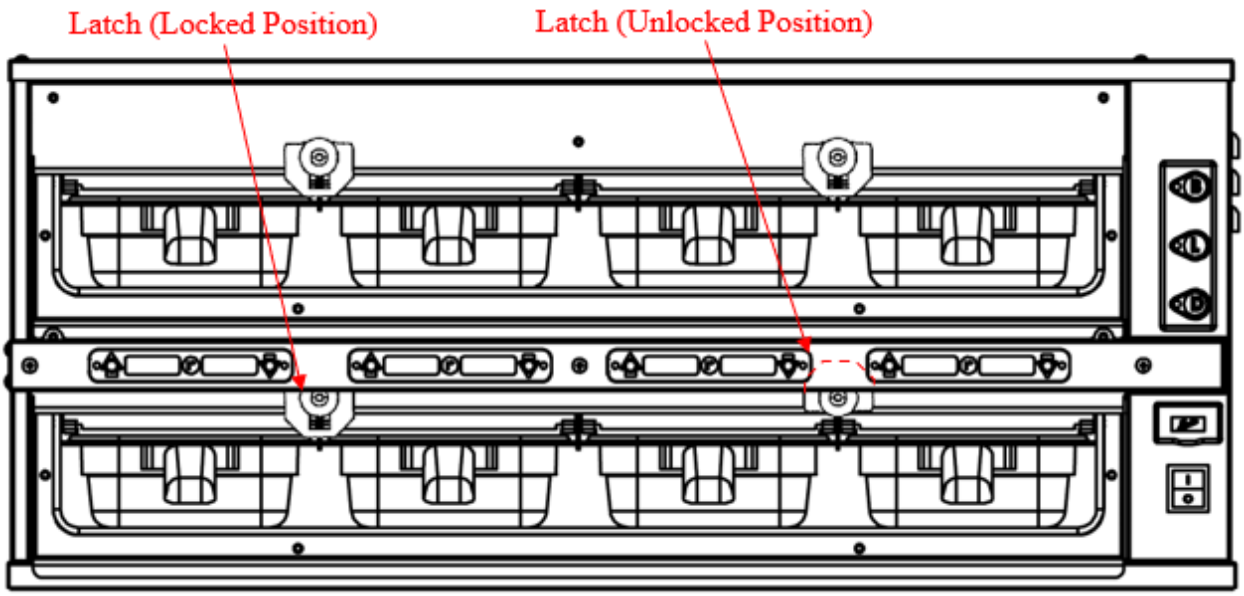


FIG. 1

EX1017.

Per Section V(A), the latches would be moveable/rotatable between locked and unlocked positions such that the lower latches would move within the gap. EX1013: Fig. 2; EX1017: 6:9-32; EX1016: ¶[0043], Fig. 1; EX1003: ¶¶424-426.



EX1005: 8 (modified).

E. Claim 10 (alternative)

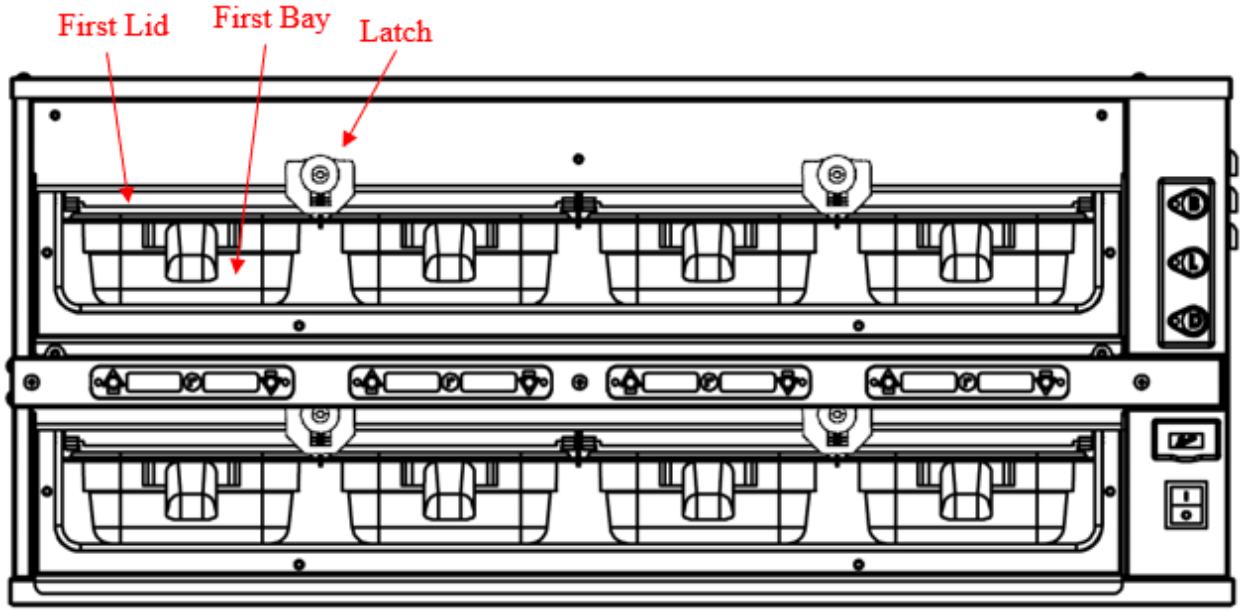
Claims 1 and 8-9 are obvious per Ground 1, with claim 10 (depending from claim 9) being further obvious per below.

10.a

Met per Section IV(J)(10.a).

10.b

IRHS24 modified per Hartfelder and/or Shei'099 has latches (Section V(A)), including a latch that retains the first lid within the first bay on the first bay's lid holding shelf. EX1013: ¶[0058]; EX1017: 6:20-21; EX1003: ¶¶427-431.



EX1005: 8 (modified).

VI. GROUND 3: Claims 5 and 6 Are Obvious Over the IRHS Documents and Shei'821 (If Necessary)

If it's determined the IRHS24's pans/trays are not received through compartment openings, such a method of operation would have been obvious. EX1003: ¶¶432-433. In this ground, claims 1 and 5-6 are obvious per Ground 1, with claims 5 and 6 being further obvious per below.

Resembling the IRHS, Shei'821 teaches inserting and accessing food pans/trays from front and rear compartment openings. EX1011: ¶¶[0024]-[0025], [0041]; EX1003: ¶434.

FIG. 1

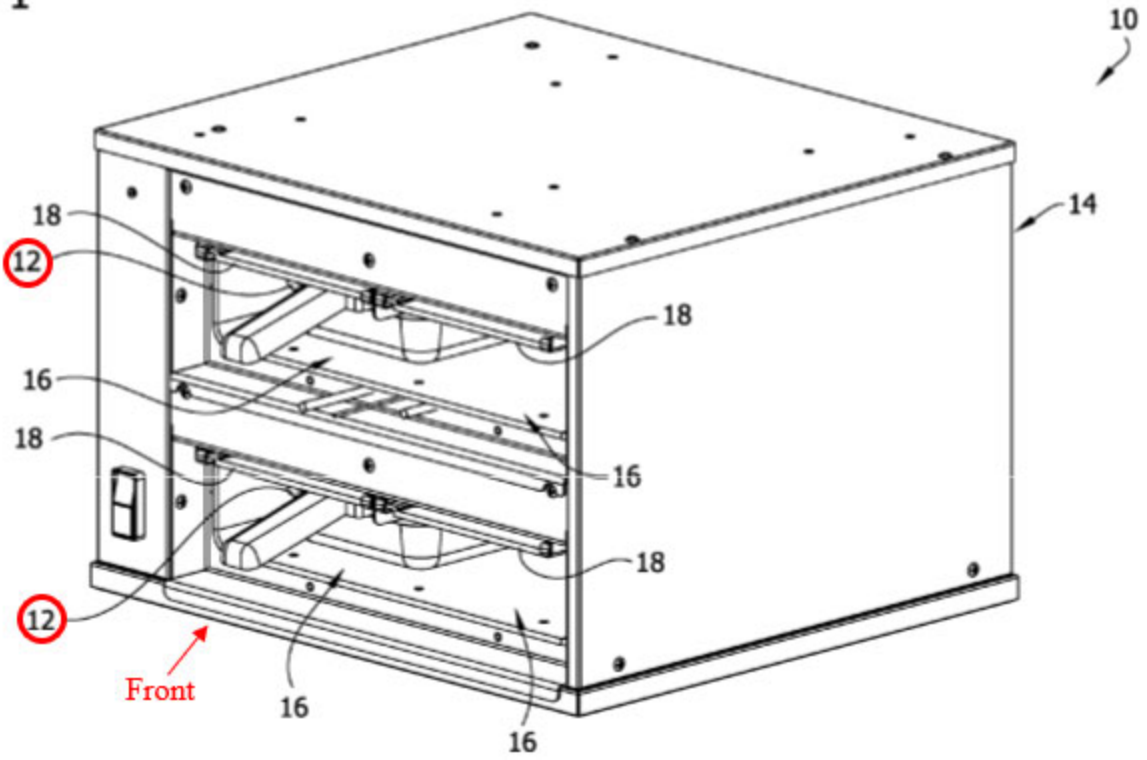
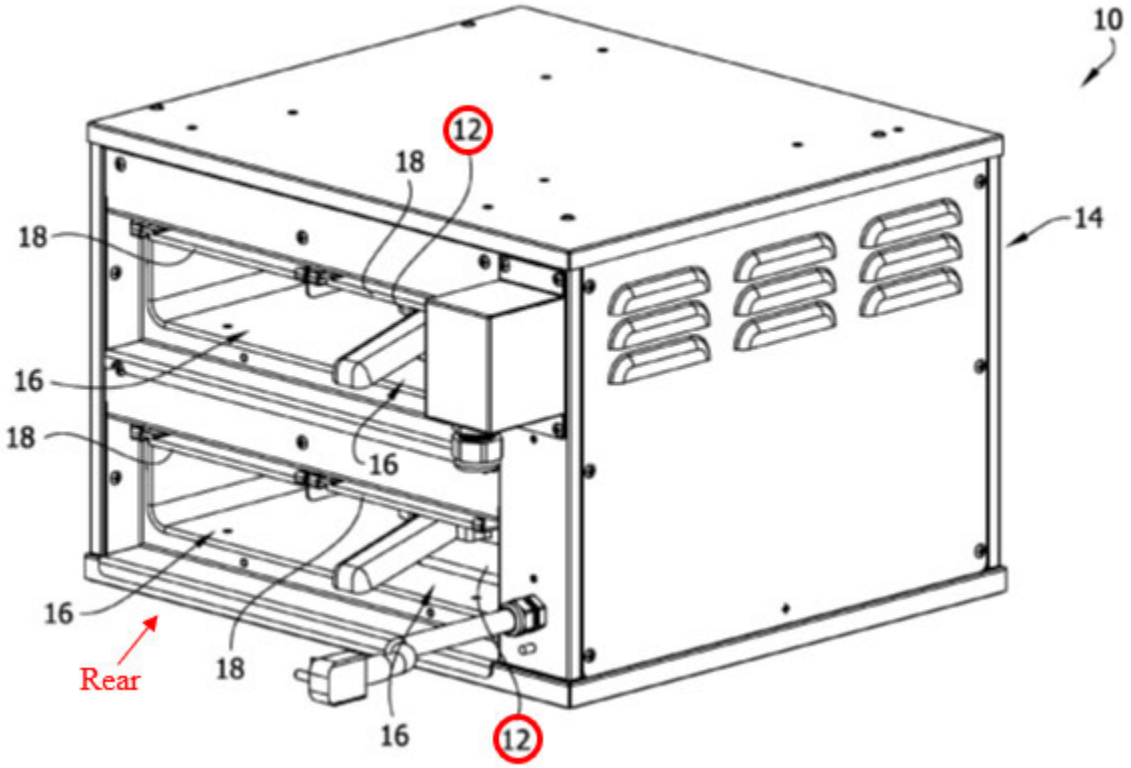

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FIG. 2


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Rear
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EX1011.

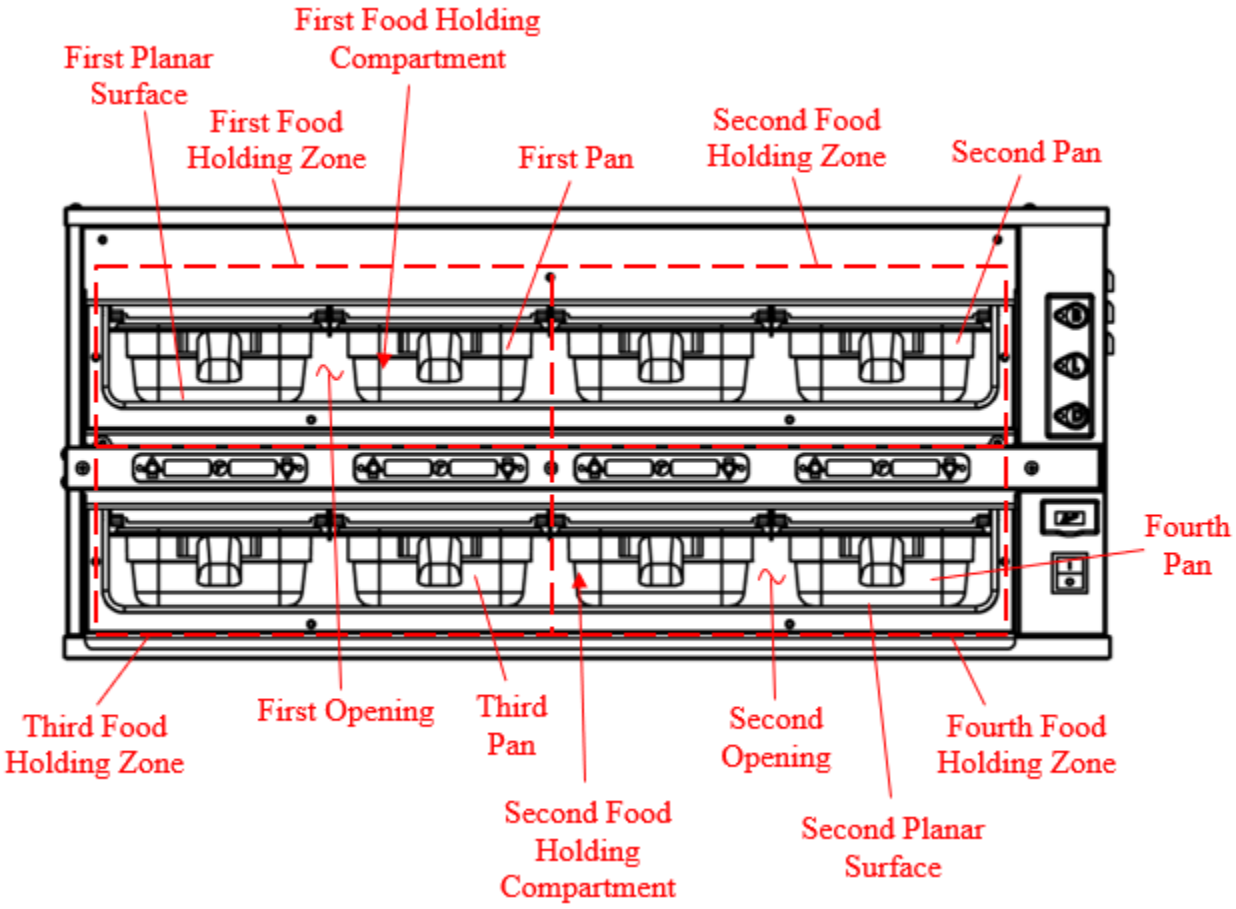
Per Section IV(B)(1.b/1.c/1.d/1.e), it would have been obvious to hold four different food types in IRHS24's four zones. EX1006: 1; EX1005: 4, 16; EX1007: 51, 53; EX1003: ¶435.

Regarding claim 5, per IRHS Documents and Shei'821, it would have been obvious to receive the pans/trays (first-fourth) with the different food types (first-fourth) through the respective openings (first, second) providing access to the zones (first opening for first and second zones, second opening for third and fourth zones) to position the different food types (first-fourth) in the respective zones intended to accomplish the different/zoned heating for warming the food before serving, with reasonable expectation of success (known operation; openings taught for such use). Section IV(B)(1.b/1.c/1.d/1.e); EX1011: ¶¶[0003], [0024]-[0026]; EX1005: 4, 16; EX1006: 1; EX1007: 53; EX1012: ¶[0003]; EX1013: ¶[0002], ¶[0004], ¶[0019], ¶[0062], ¶[0063]; EX1003: ¶¶436-437, 439.

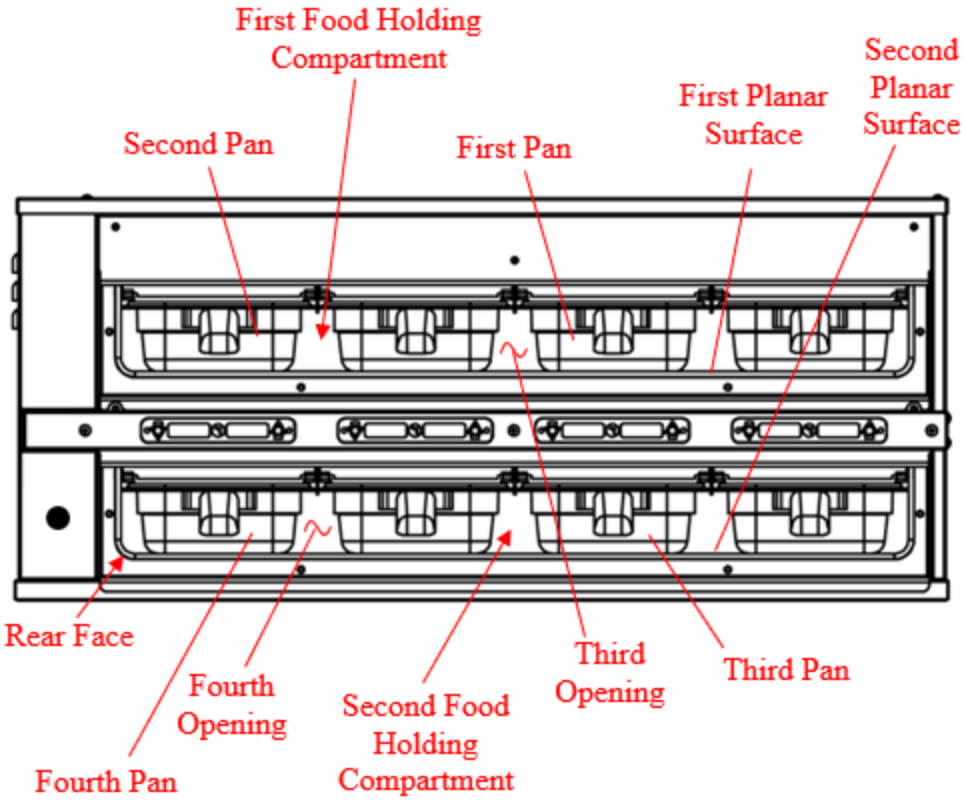
IRHS Documents teach a pass-through design "allow[ing] crews to work both sides." EX1007: 67; EX1003: ¶438.

Regarding limitations 6.b/6c, per Shei'821 and IRHS Documents, it would have been obvious to provide rear face openings (third, fourth) for the pans/trays (first-fourth) to pass therethrough into the respective compartments/zones onto the planar surfaces to increase access to the food/compartments to permit crews to

work both sides, with reasonable expectation of success (prior art demonstrated). EX1048: 5:44-57; EX1011: ¶[0025], Figs. 1, 2; EX1007: 67; EX1018: 4:49-56; EX1003: ¶¶436, 439-440.



EX1005: 8.



EX1005: 8 (modified rear).

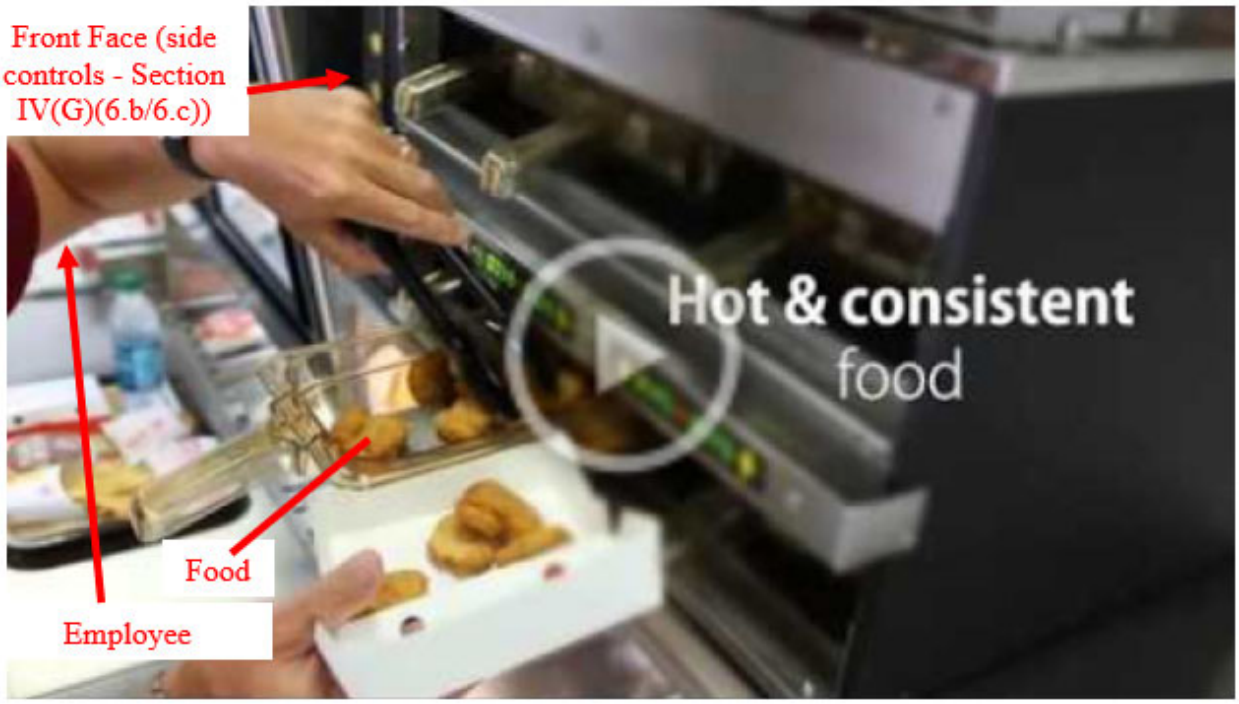
VII. GROUND 4: Claim 7 is Obvious Over the IRHS Documents, Shei'821, McMillan, Veltrop, and/or Hartfelder

In this ground, claims 1 and 5-6 are obvious per Grounds 1and 3, with claim 7 (depending from claim 6) being further obvious per below.

IRHS Documents disclose employees in front and behind IRHS, supplying food to the IRHS' rear face, and removing food from IRHS' front face. Section IV(G)(6.b/6.c); EX1005: 19; EX1007: 28, 51, 52; EX1003: ¶¶441-442.



EX1007: 32.



EX1007: 20.

McMillan and Veltrop teach one operator/cook/preparer loading food into the compartments from one side and another operator/server/assembler removing food from the compartments' other side. EX1019: 3:2-11; EX1022: ¶[0002]; EX1003: ¶¶443-448.

Shei'821 and Hartfelder explain users remove pans/trays to access/remove food then reinsert the pans/trays into the compartments. EX1011: ¶[0024]; EX1013: ¶[0057], ¶[0062]; EX1003: ¶¶448-449.

Per McMillan and/or Veltrop, it would have been obvious to position IRHS24 between food cooking and assembly areas to supply/receive pans/trays (first-fourth) of the freshly cooked different food types (first-fourth) into the

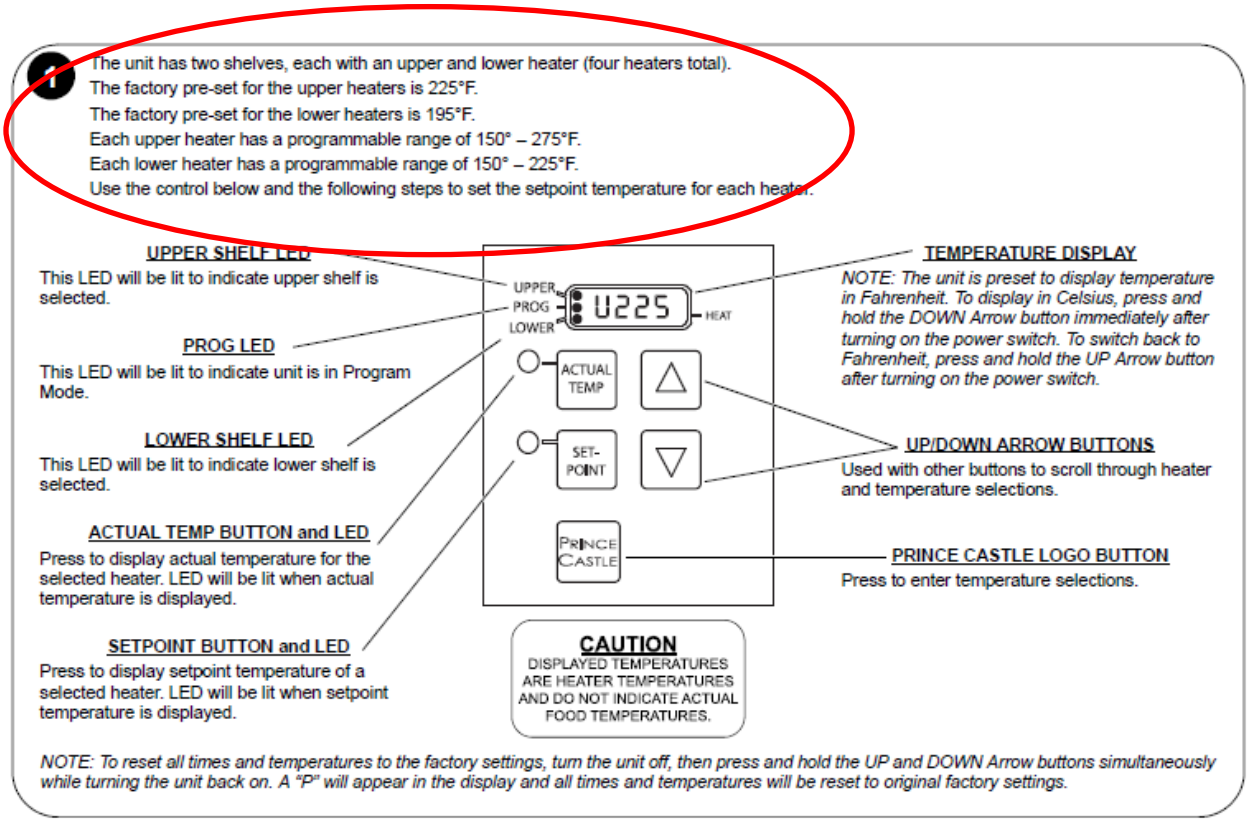
compartments (first, second) from the rear side via the respective third and fourth openings to hold the freshly cooked food warm before serving, and remove pans/food from the compartments from the front side via the respective first or second openings, and, per Shei'821 and/or Hartfelder, to receive the pans/trays (first-fourth) back in the respective compartments from the front side via the respective first or second openings after food was removed to continue warming remaining food and/or receive new freshly cooked food. EX1019: 3:2-11; EX1022: ¶[0002]; EX1011: ¶[0024]; EX1013: ¶[0057], ¶[0062]; EX1003: ¶¶450, 454.

Such IRHS24 positioning/use would maintain food warm for serving and facilitate efficient kitchen use, providing cooking and assembly personnel separate, simultaneous access, and reducing bottlenecks, with reasonable expectation of success (IRHS compartments open on front/rear; known operation). EX1007: 67; EX1047: 2:45-55, 8:57-9:16, 10:29-34; EX1048: 5:44-57; EX1022: ¶[0002]; EX1019: 3:2-11; EX1003: ¶¶451-453.

VIII. GROUND 5: Claim 18 is Obvious Over the IRHS Documents, Prince Castle, and/or Reese (If Necessary)

If it's determined the IRHS24's first heating element does not output more heat energy than the second heating element, such operation would have been obvious. EX1003: ¶¶455-456. In this ground, claims 1 and 16-18 are obvious per Ground 1, with claim 18 being further obvious per below.

Prince Castle teaches default presets 225°F for upper heaters (275°F maximum) and 195°F for lower heaters (225°F maximum). EX1009: 22, 40; EX1003: ¶457.



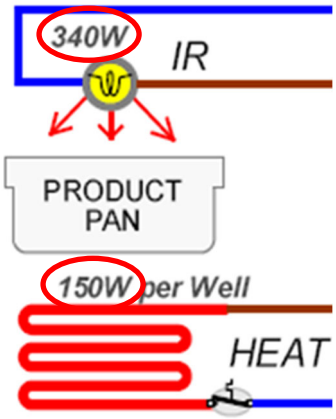
EX1009: 40.

Reese teaches turbo boost functions for upper IR. EX1027: ¶¶[0001], [0019], [0021], [0025]; EX1003: ¶¶458-459.

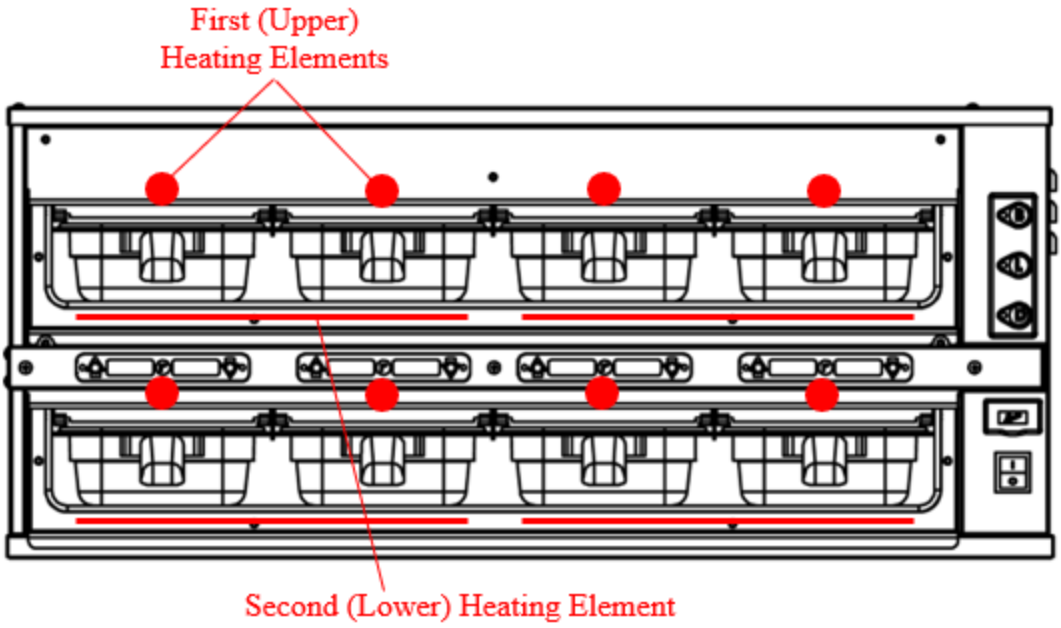
Per Prince Castle, IRHS Documents, and/or Reese, it would have been obvious to operate the upper IR (first) element to output more heat energy than the lower (second) element (higher target temperature, turbo boost heat, and/or higher

wattage rating (EX1008: 64)) to overcome distance between the upper IR element and food, counteract evaporative cooling, maintain food surface temperature/texture, compensate for upper IR energy radiating in all directions, and/or permit the cook "to re-crisp [fried] food," "melt cheese," and/or "brown [food]" with IR. EX1027: ¶[0021]; EX1006: 1; EX1003: ¶¶460-465. This "provide[s] optimum environment" and "minimize[s] temperature distribution from top to bottom." EX1006: 1; EX1007: 51; EX1003: ¶466.

This applies a known technique (upper elements outputting more heat than lower elements) to improve a similar device (IRHS24) in the same way (higher setpoint temperatures for upper elements than lower elements) with reasonable expectation of success (independent operation of IR upper elements which pulse on/off as needed and are higher wattage (340W) than lower elements (300W)). EX1006: 1; EX1003: ¶¶467-470.



EX1008: 64.



EX1005: 8.

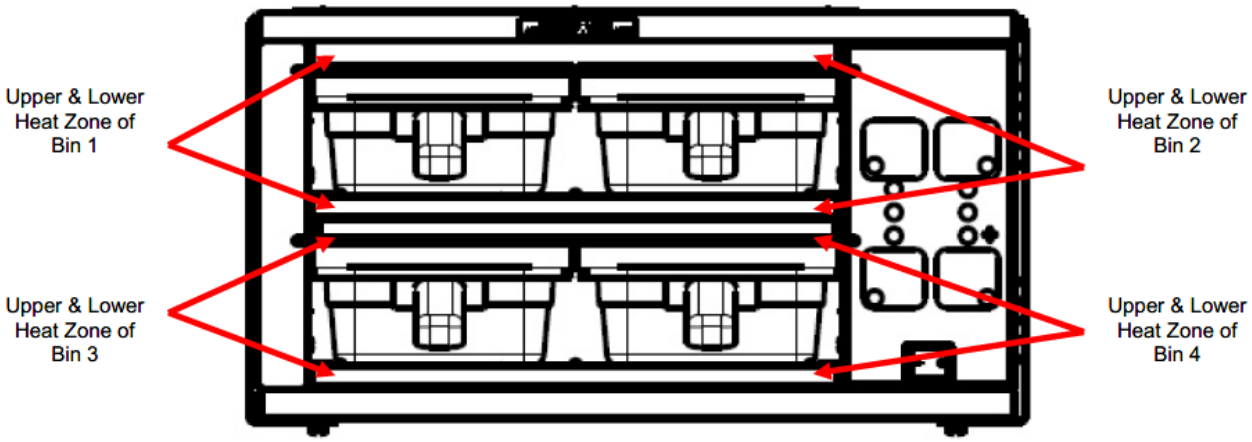
IX. GROUND 6: Claim 19 is Obvious Over IRHS Documents and Merco (If Necessary)

If it's determined the IRHS24's second heating element does not output more heat energy than the first heating element, such an operation would have been obvious. EX1003: ¶¶471-472. In this ground, claims 1, 16, 17, and 19 are obvious per Ground 1, with claim 19 being further obvious per below.

Merco demonstrates heating certain foods (eggs) with more lower heat (180ºF) than upper heat (160ºF). EX1028: 30, 39; EX1003: ¶¶473-474.



EX1028: 21 (unannotated).



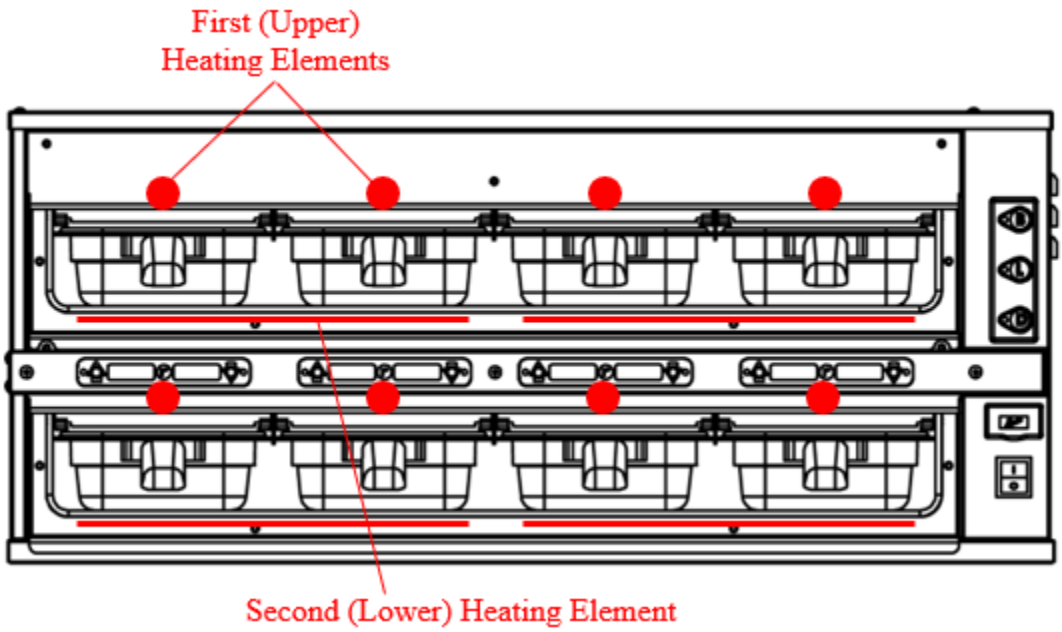
EX1028: 30 (annotations in original).

Per Merco, it would have been obvious for each lower (second) element to output more heat than each upper (first) element for holding food products (e.g., eggs) requiring a higher lower temperature than upper temperature. EX1028: 39; EX1003: ¶475.

Moreover, as each zone's elements are independently controllable (Section IV(B)(1.b/1.c/1.d/1.e) and different upper and lower temperatures were known (EX1028: 31, 39), more upper heat than lower heat would have been an obvious

design choice (evidenced by Merco/eggs) from a set of finite options (upper heat greater than, equal to, or less than lower heat). *Uber Techs., Inc. v. X One, Inc.*, 957 F.3d 1334, 1341 (Fed. Cir. 2020); EX1028: 31, 39; EX1003: ¶¶476-477.

This uses a known technique (lower elements outputting more heat than upper elements) to improve a similar device (IRHS24) in the same way (higher lower target temperature than upper target temperature) with reasonable expectation of success (IRHS24 elements independently controllable and prior art demonstrating suitability). EX1028: 31, 39; EX1003: ¶¶478-480.



EX1005: 8.

X. GROUND 7: Claims 16-20 are Obvious Over the IRHS Documents, Prince Castle, Reese, Merco, and/or Jones (If Necessary)

If limitations pertaining to "user input" being a "food item" (Claim 17) are determined not to be met, such limitations would have been obvious. EX1003: ¶481.

Jones has temperature settings assigned to and following food product names—the user sets the name, and the heating elements are operated according to the set name's temperature settings. EX1012: ¶¶[0097]-[0098], [0112]-[0115]; EX1003: ¶¶482-483.

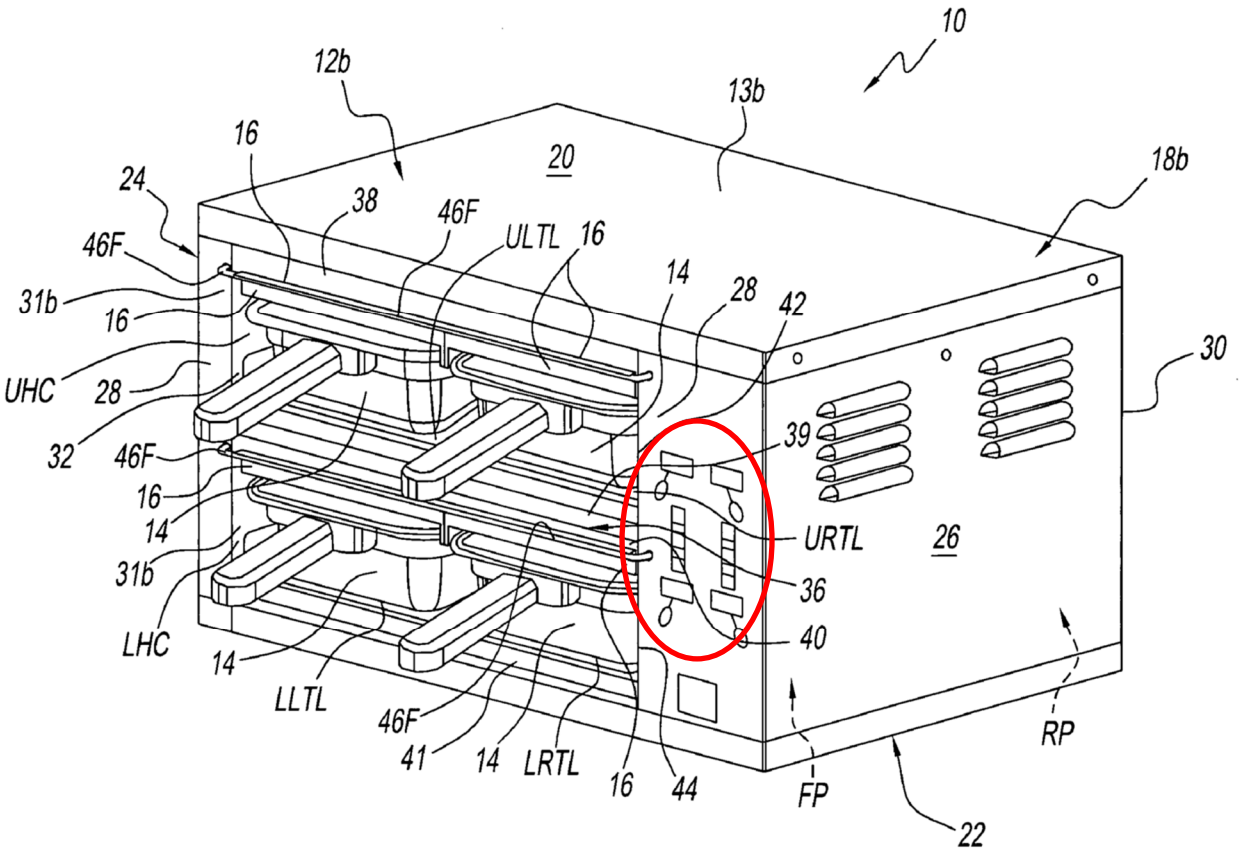


Fig. 1B

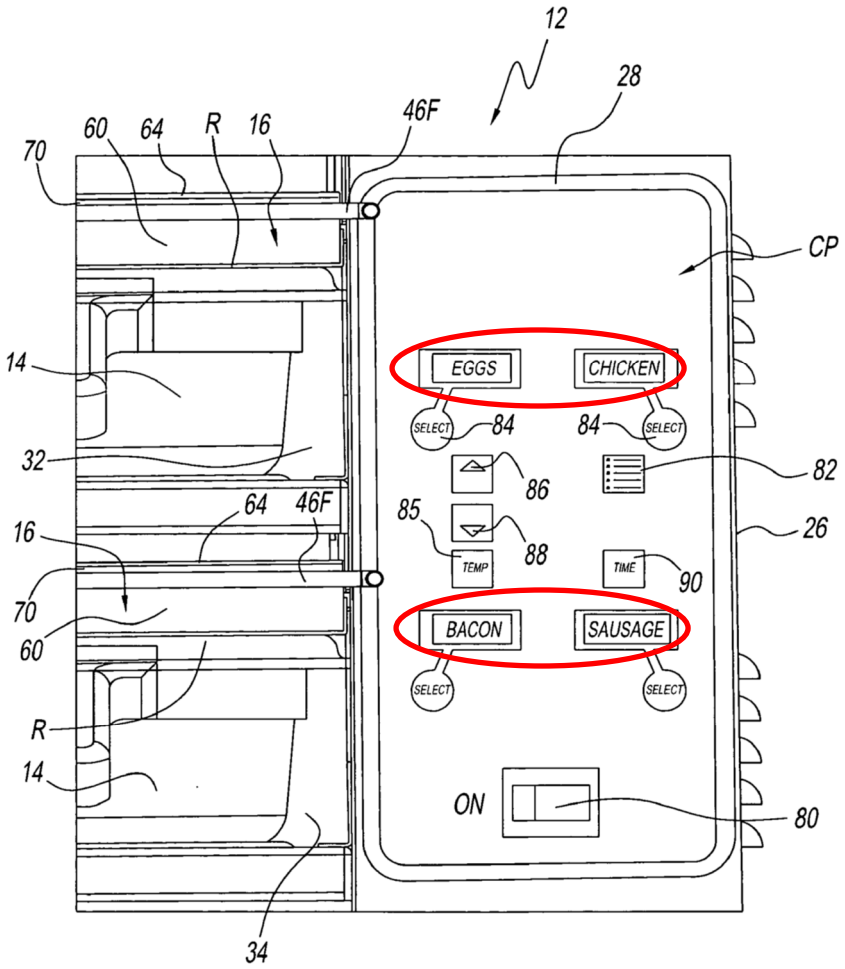


Fig. 17

EX1012.

Per Jones, it would have been obvious to modify IRHS24's timer bars/bezels to set temperature setpoints by individually assigning food product names. EX1003: ¶484. This would provide an easy, fast, and intuitive way for a user to change setpoint temperatures by simply changing assigned names. EX1012: ¶¶[0112]-[0115]; EX1016: ¶[0060]; EX1003: ¶485. This also allows the user to change the food product names, and thereby the holding temperatures, in real time

(e.g., temporary, small-scale change) to accommodate changes in held food types (rather than USB programing or unit-wide/global daypart changes). EX1005: 16, 19; EX1007: 33; EX1006: 1; EX1003: ¶486.

IRHS24 has controls (arrow/enter buttons) for selecting parameters and the displays already display food product names (BURG). EX1006: 1; EX1005: 16-17; EX1003: ¶487.

OPERATION – TIMER BAR FUNCTIONALITY



1. Status LEDs: Used for indicating status of pan.
   a. Non-Illuminated -Timer is Inactive – no product in pan
   b. GREEN – Timer is Active – product in pan (use first)
   c. FLASHING GREEN = Cook Warning Time reached (cook more product) or keypad in EDIT MODE (programming)

EX1005: 16.

POSA would program IRHS24's timer bars/controller to change the food product name via the existing enter/menu and arrow buttons, like Jones. EX1012: ¶¶[0097], [0112]-[0115], [0124]-[0125]; EX1019: 6:15-19; EX1003: ¶¶488-489.

This applies a known technique (associating temperature setpoints with food product names) to improve a similar device (IRHS24) in the same way (change

food product names to change temperature setpoints) with reasonable expectation of success (IRHS24 has controls/displays, and Jones demonstrates possible). EX1012: ¶¶[0097], [0112]-[0115], [0124]-[0125]; EX1003: ¶¶490-491.

In this ground, claims 16-20 are obvious per Grounds 1 and 5-6, with claim 17 further being obvious per this section. Per Jones, it would have been obvious for the received user input (via IRHS24's enter/arrow buttons) to be a selection of a food item (name) for the first zone, with the food item selection being associated with the operation and control of the first and second elements (by IRHS24's controller per the selected name's assigned setpoint temperature). EX1005: 16; EX1012: ¶¶[0112]-[0115]; EX1016: ¶[0060]; Section IV(B)(1.b/1.c/1.d/1.e); EX1003: ¶¶492-494.

XI. GROUND 8: Claims 1-20 are Obvious Over the IRHS Documents, Hartfelder, Shei'099, Shei'821, McMillan, Veltrop, Prince Castle, Reese, Merco, Jones, and/or Shei'155 (If Necessary)

It would have been obvious to conductively couple IRHS's lower heating elements to aluminum heatsink plates/planar surfaces (if such construction is determined not to be met above). EX1003: ¶¶495-496.

Veltrop and Shei'155 teach conductively coupling heating elements (67, 39) to aluminum plates/heatsinks (51, 29). EX1022: ¶¶[0023], [0025], [0050]; EX1016: ¶[0039]; EX1003: ¶¶497-498.

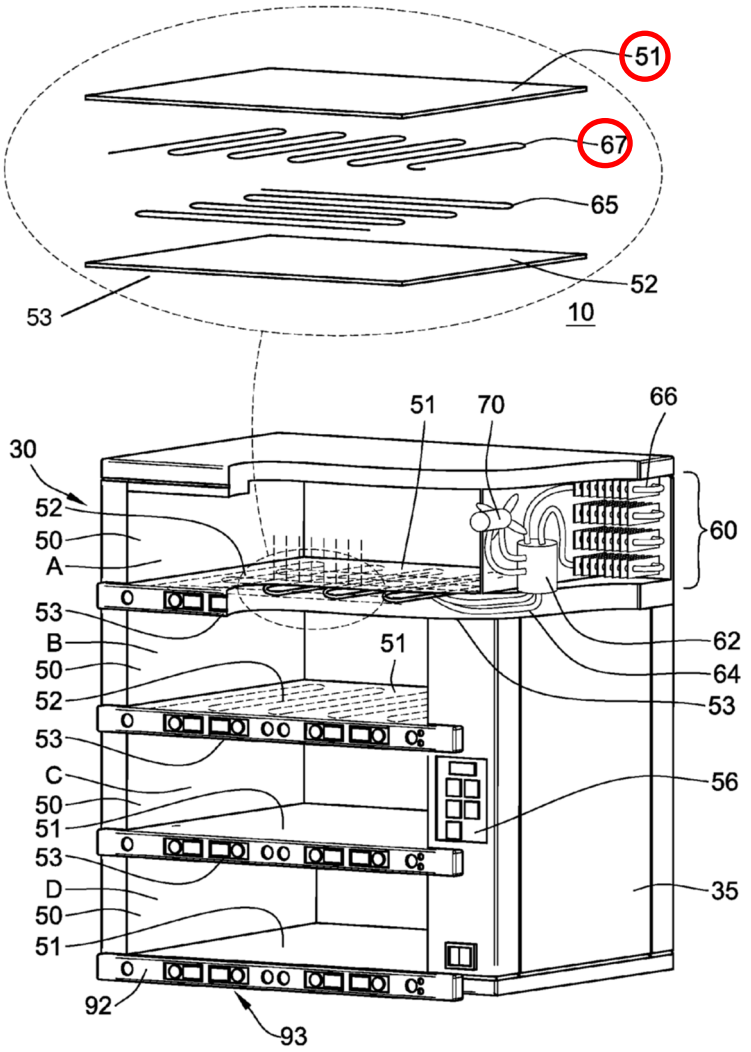
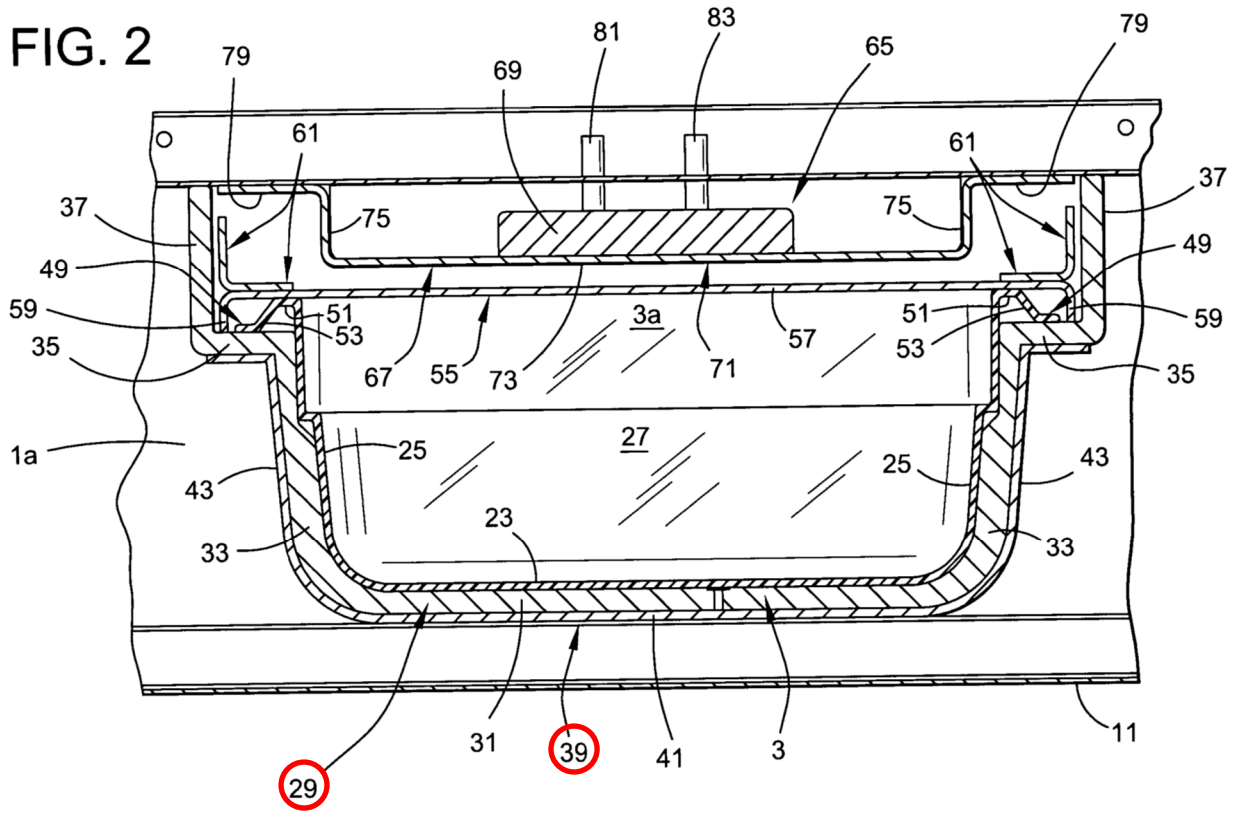

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FIG. 2

EX1022.



EX1016.

Per Veltrop and/or Shei'155, it would have been obvious to conductively couple the lower elements to the heatsink plates because conduction effectively and efficiently transfers heat to heatsinks and pans. EX1010: ¶[0020]; EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1022: ¶[0050]; EX1003: ¶500.

This uses a known technique (Veltrop's and Shei'155's construction) to improve a similar device (IRHS24's/IRHS34's heatsink) in the same way (conductive heat transfer from elements to heatsink/food) with reasonable expectation of success (conduction heating being well-known). EX1010: ¶[0020];

EX1016: Fig. 2, ¶[0039]; EX1017: Fig. 3, 4:51-53; EX1020: ¶[0020]; EX1022: ¶[0050]; EX1003: ¶¶501-503.

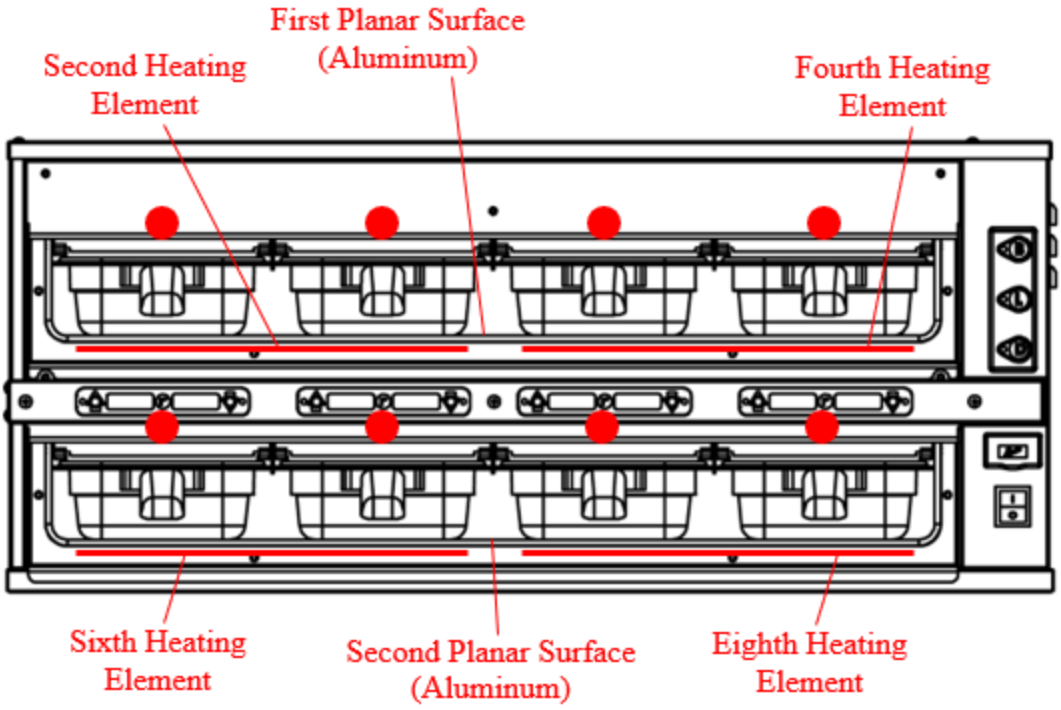
This renders obvious IRHS24's/IRHS34's lower elements heating (thermally coupled to) the heatsink plates (planar surfaces) and pans through conduction. EX1003: ¶504.

Moreover, per Veltrop and/or Shei'155, it would have been obvious to make IRHS24's/IRHS34's heatsink plates aluminum as preferred material that "conducts heat well" and is lightweight and inexpensive. EX1017: 3:32-33; EX1022: ¶[0023]; EX1020: ¶¶[0021]-[0023]; EX1021: ¶¶[0020]-[0022]; EX1003: ¶499.

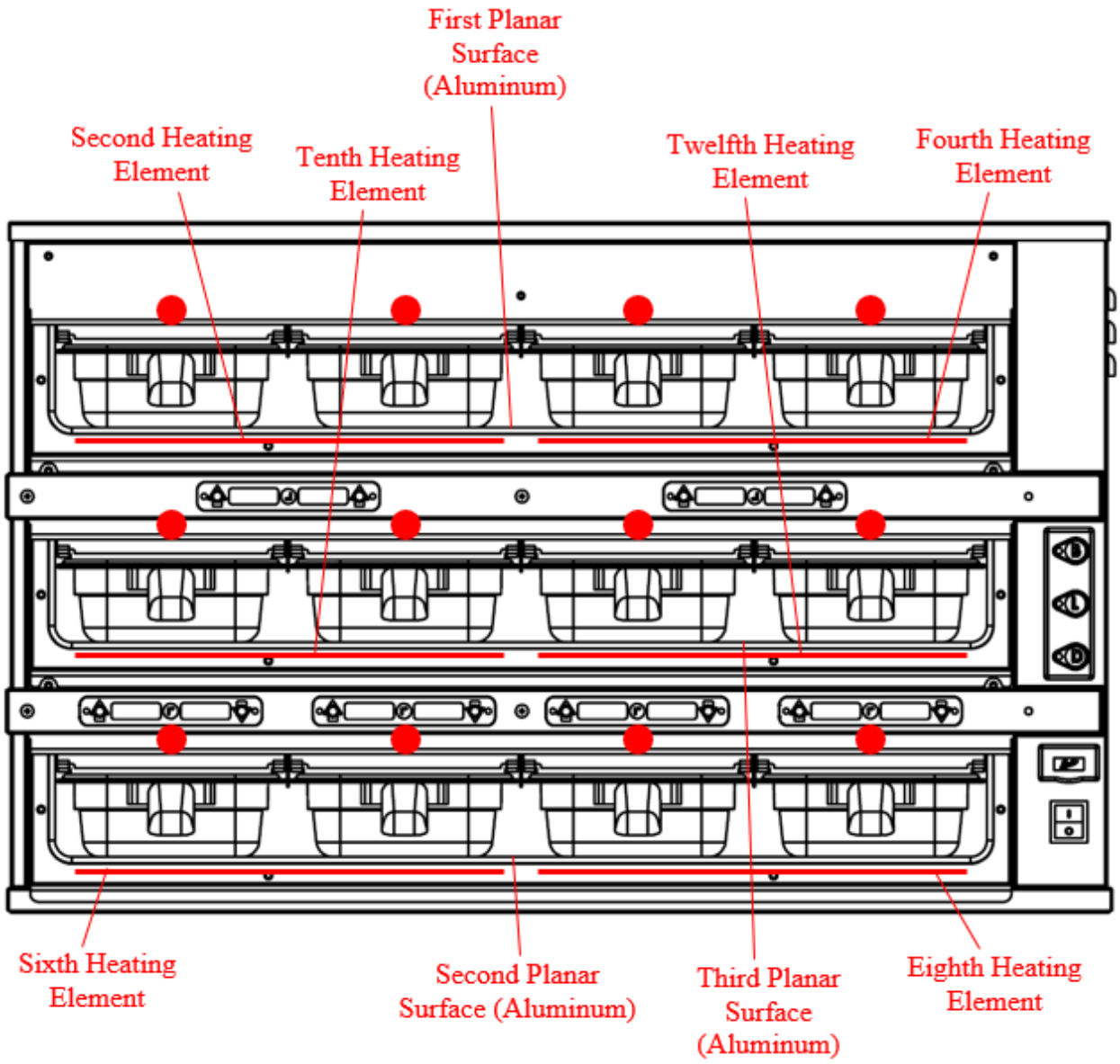
This uses a known technique (aluminum) to improve a similar device (IRHS24's/IRHS34's heatsinks) in the same way (aluminum surfaces supporting pans for localized heating) with reasonable expectation of success (known suitability of aluminum shelves for zoned heating). EX1016: ¶[0039]; EX1020: ¶¶[0021]-[0023]; EX1021: ¶¶[0020]-[0022]; EX1022: ¶[0023]; EX1003: ¶¶501-503.

This renders obvious the first, second, and third heatsink planar surfaces comprising thermally conductive aluminum. EX1003: ¶504.

In this ground, claims 1-20 are obvious per Grounds 1-7, with limitations 1.a.3, 1.a.6, 1.b., 1.c, 1.d, 1.e, 3.a.3, 3.b, and 3.c further being obvious as described above and demonstrated below. EX1003: ¶505.


First Planar Surface
(Aluminum)
Second Heating
Element
Fourth Heating
Element
Sixth Heating
Element
Second Planar Surface
(Aluminum)
Eighth Heating
Element

EX1005: 8.

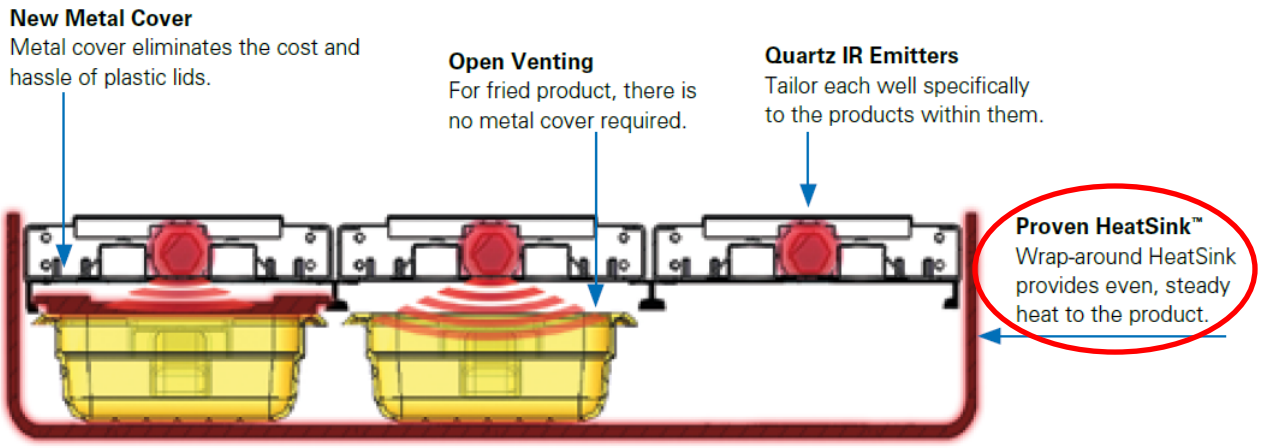


EX1005: 9.

XII. GROUND 9: Claims 1-20 are Obvious Over the IRHS Documents, Hartfelder, Shei'099, Shei'821, McMillan, Veltrop, Prince Castle, Reese, Merco, Jones, and/or Shei'155 (If Necessary)

If limitations pertaining to "panels" and "planar surfaces" are determined not to be met, such limitations would have been obvious. EX1003: ¶¶506, 508.

IRHS24's heatsink sides extend upwardly. EX1003: ¶507.



EX1007: 53.

Hartfelder and Veltrop teach flat heatsinks (30, 51). EX1013: ¶¶[0030], [0037]; EX1022: ¶¶[0016], [0022], [0025]; EX1003: ¶¶509-510.

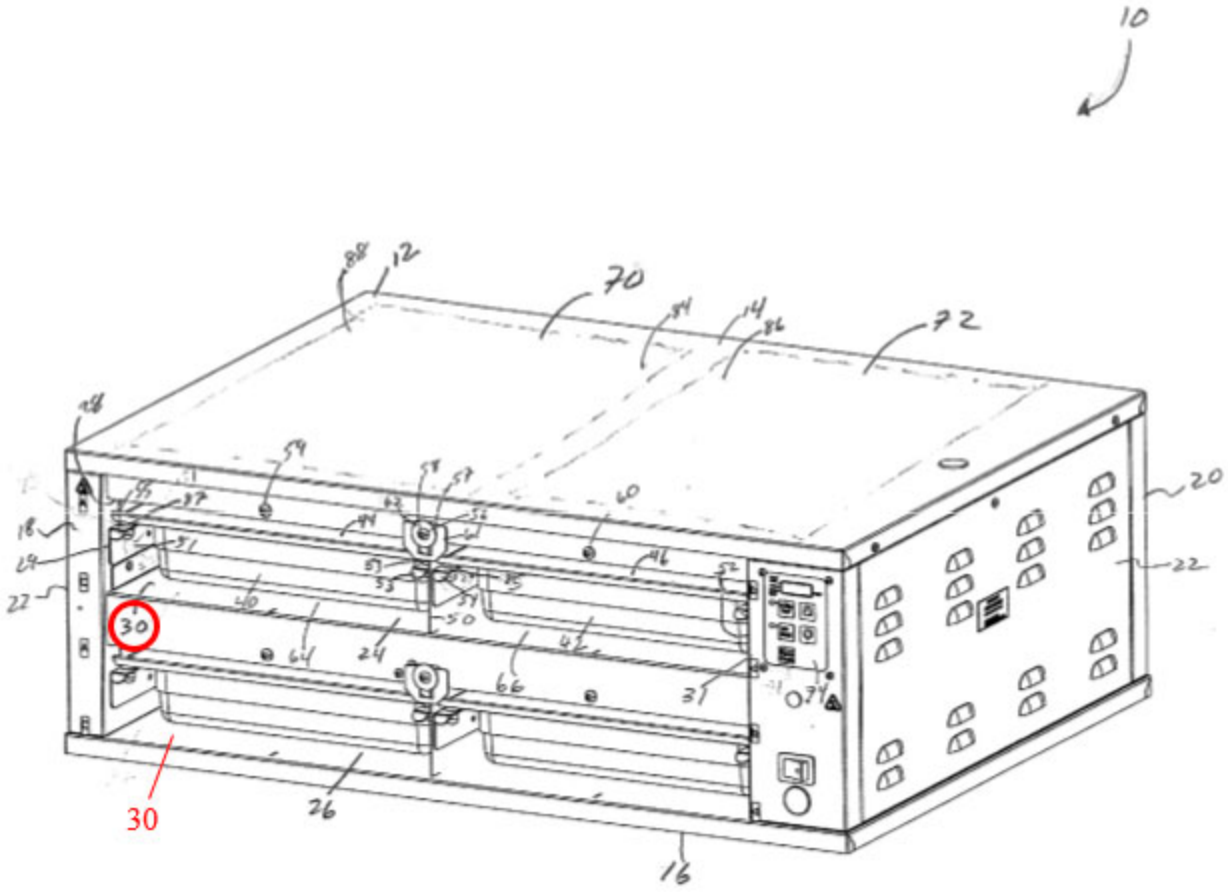


FIGURE 1

EX1013.

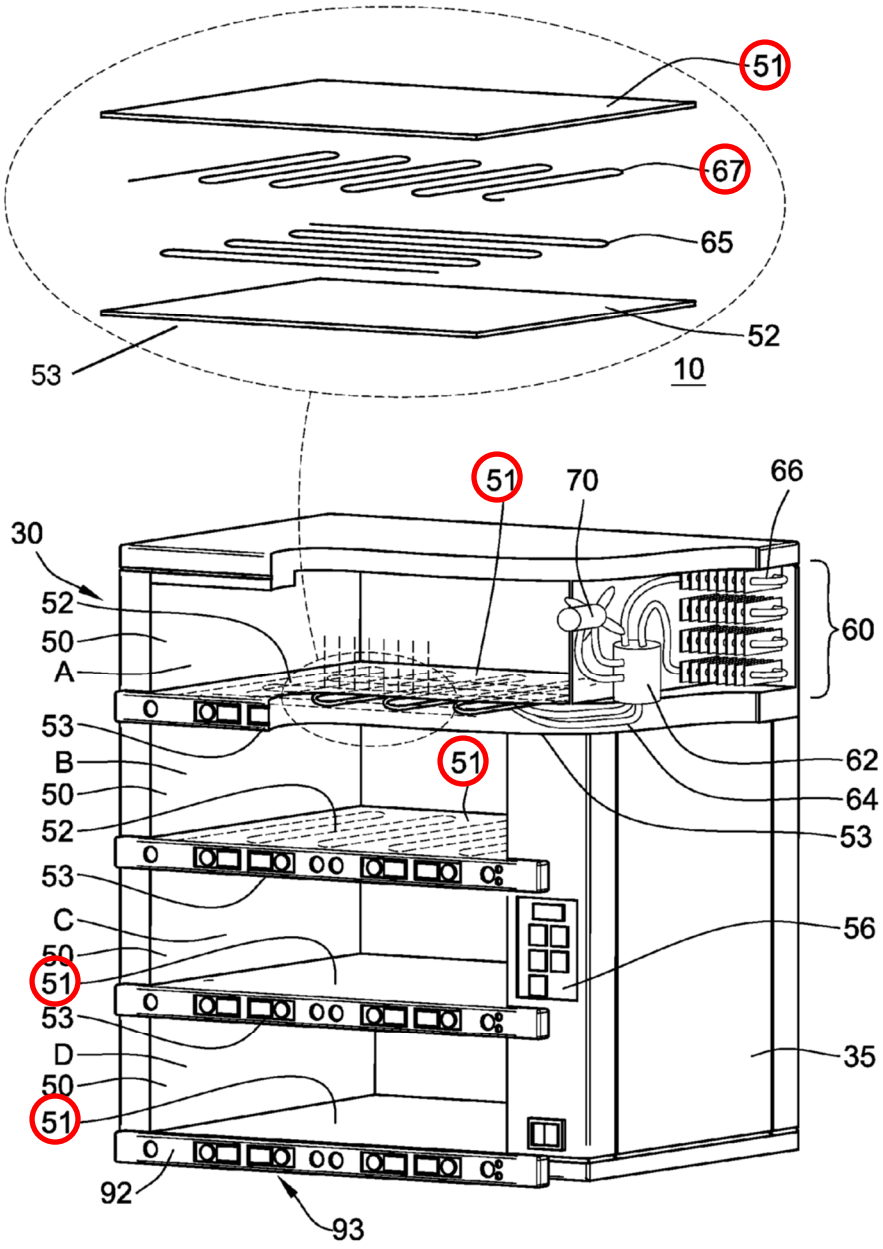
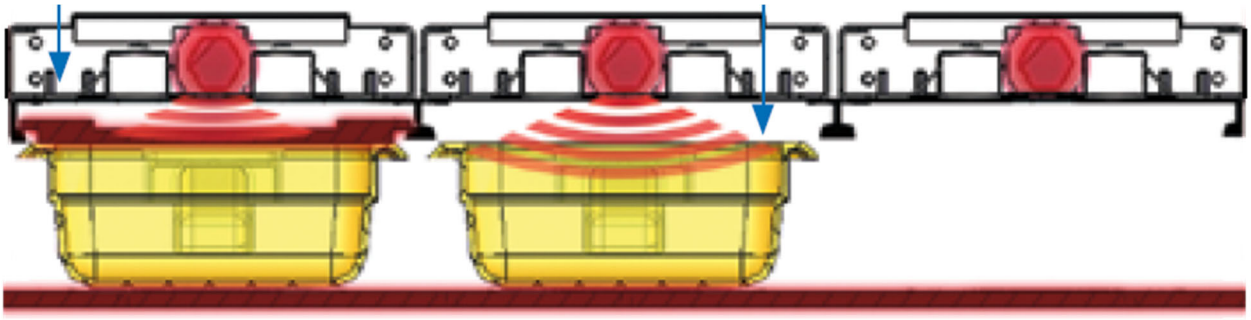


FIG. 2

EX1022.

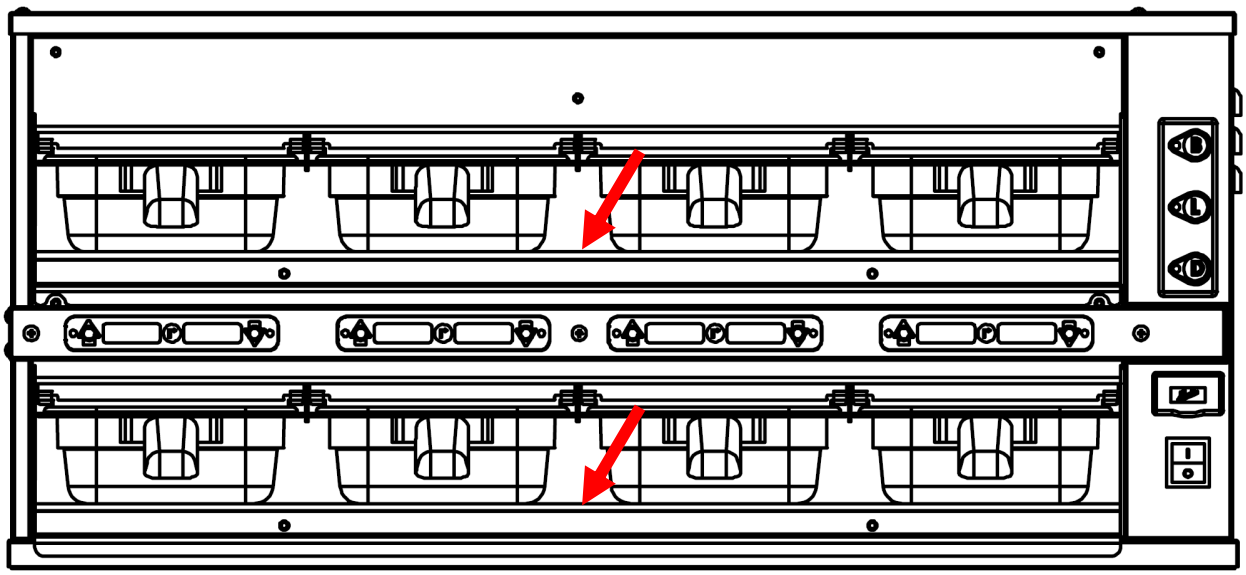
Per Hartfelder and/or Veltrop, it would have been obvious to modify IRHS24's/IRHS34's heatsinks to be planar. EX1003: ¶¶511, 517.



EX1007: 53 (modified)

This would reduce IRHS24's/IRHS34's width (smaller footprint) and manufacturing cost (less material, easier to construct) and provide better heating consistency (compartment sides vs. middle). EX1007: 53; EX1003: ¶¶512-514.

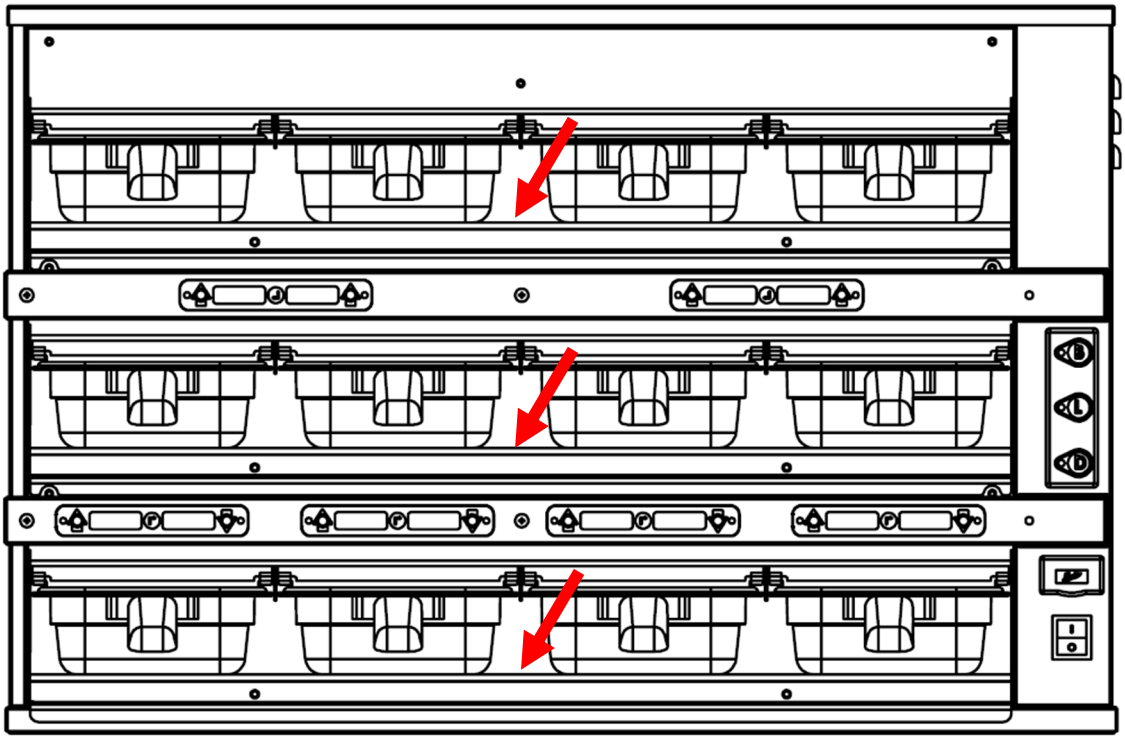
This applies a known technique (flat heatsink) to improve a similar device (IRHS24/IRHS34) in the same way with reasonable expectation of success (minor reconfigurations demonstrated in prior art). EX1013: Fig. 1; EX1022: Fig. 2; EX1020: ¶¶[0021]-[0023]; EX1003: ¶¶515-516, 518.



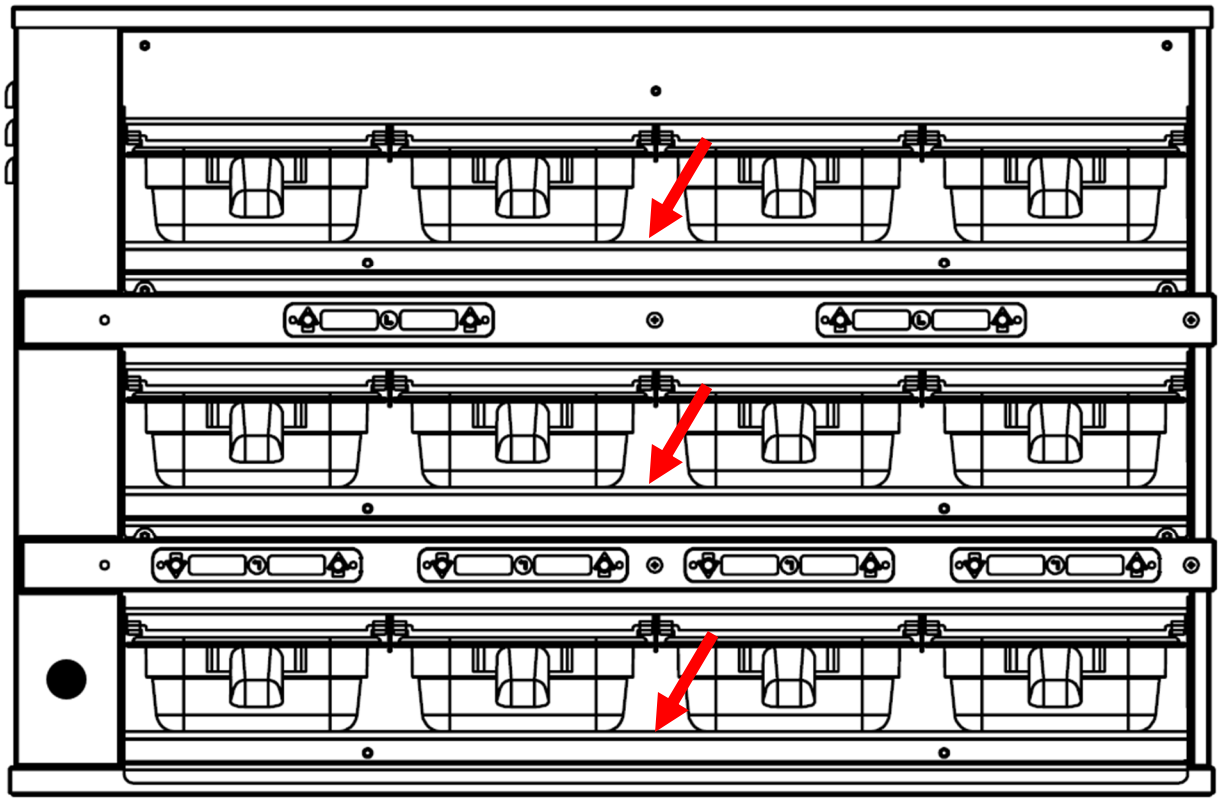
EX1005: 8 (modified-front).



EX1005: 8 (modified-rear).

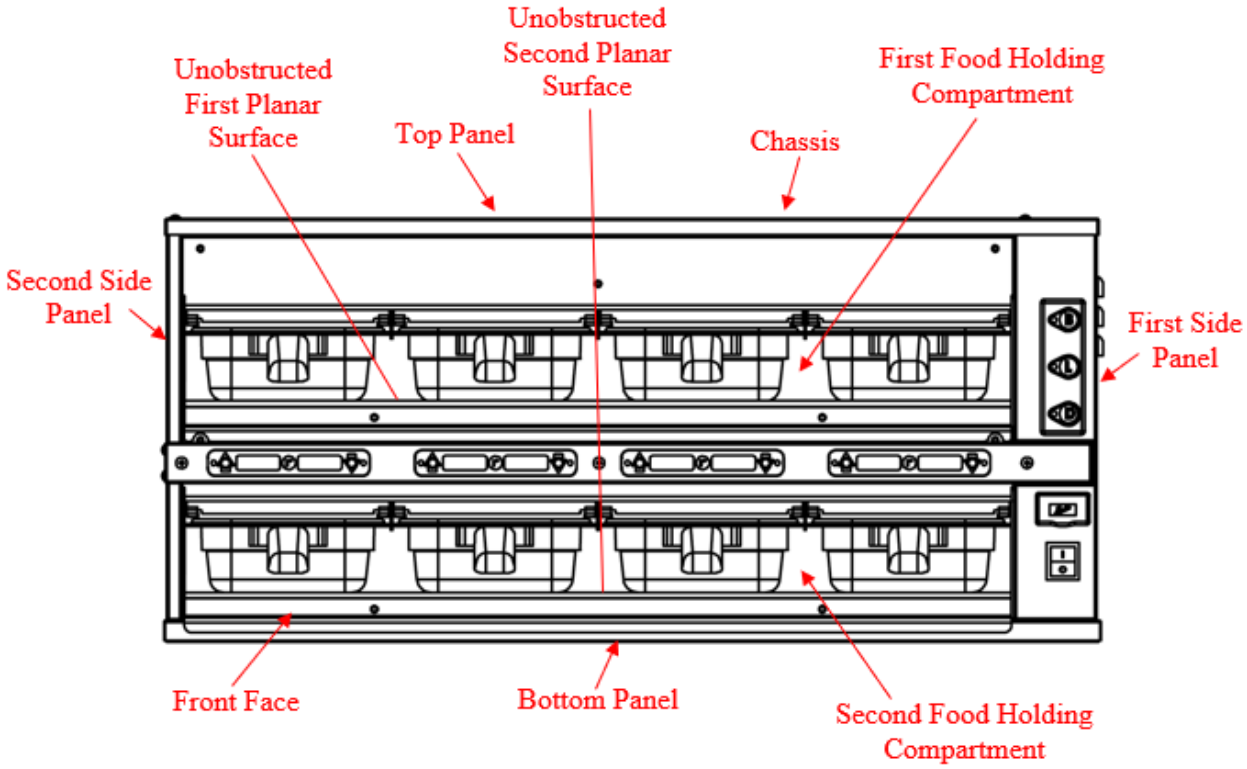


EX1005: 9 (modified-front).

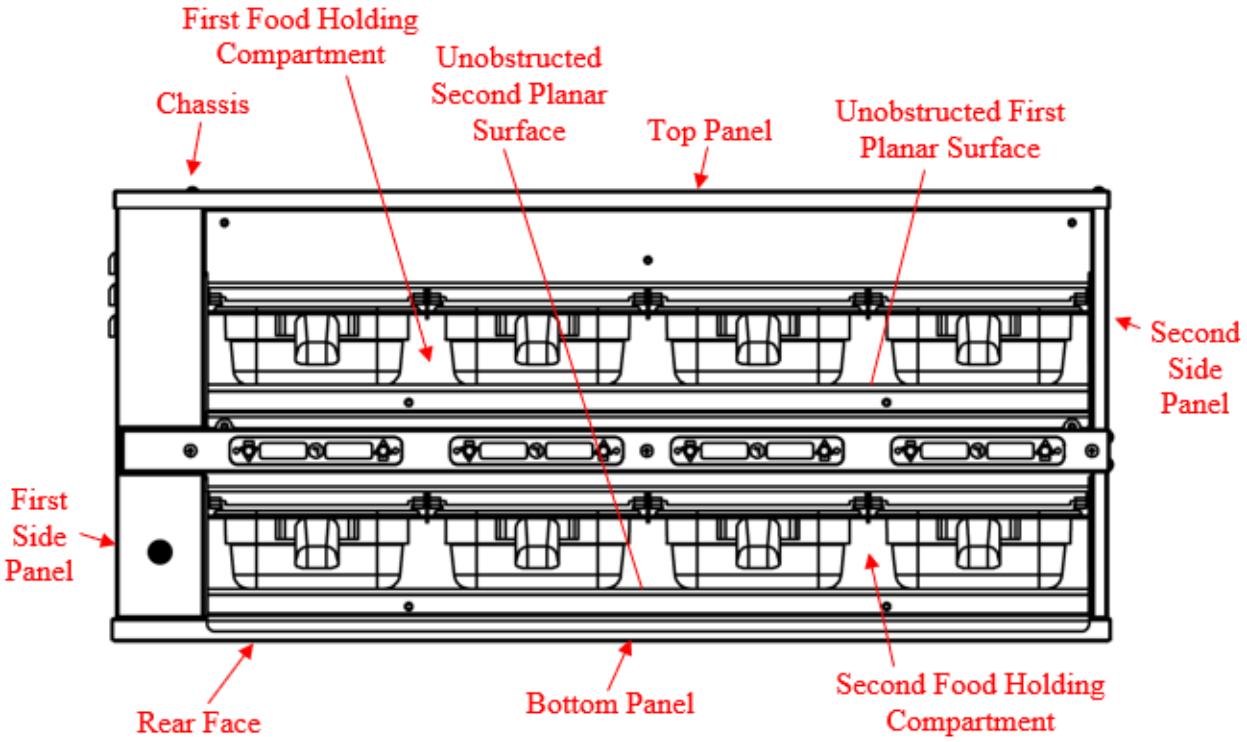


EX1005: 9 (modified-rear).

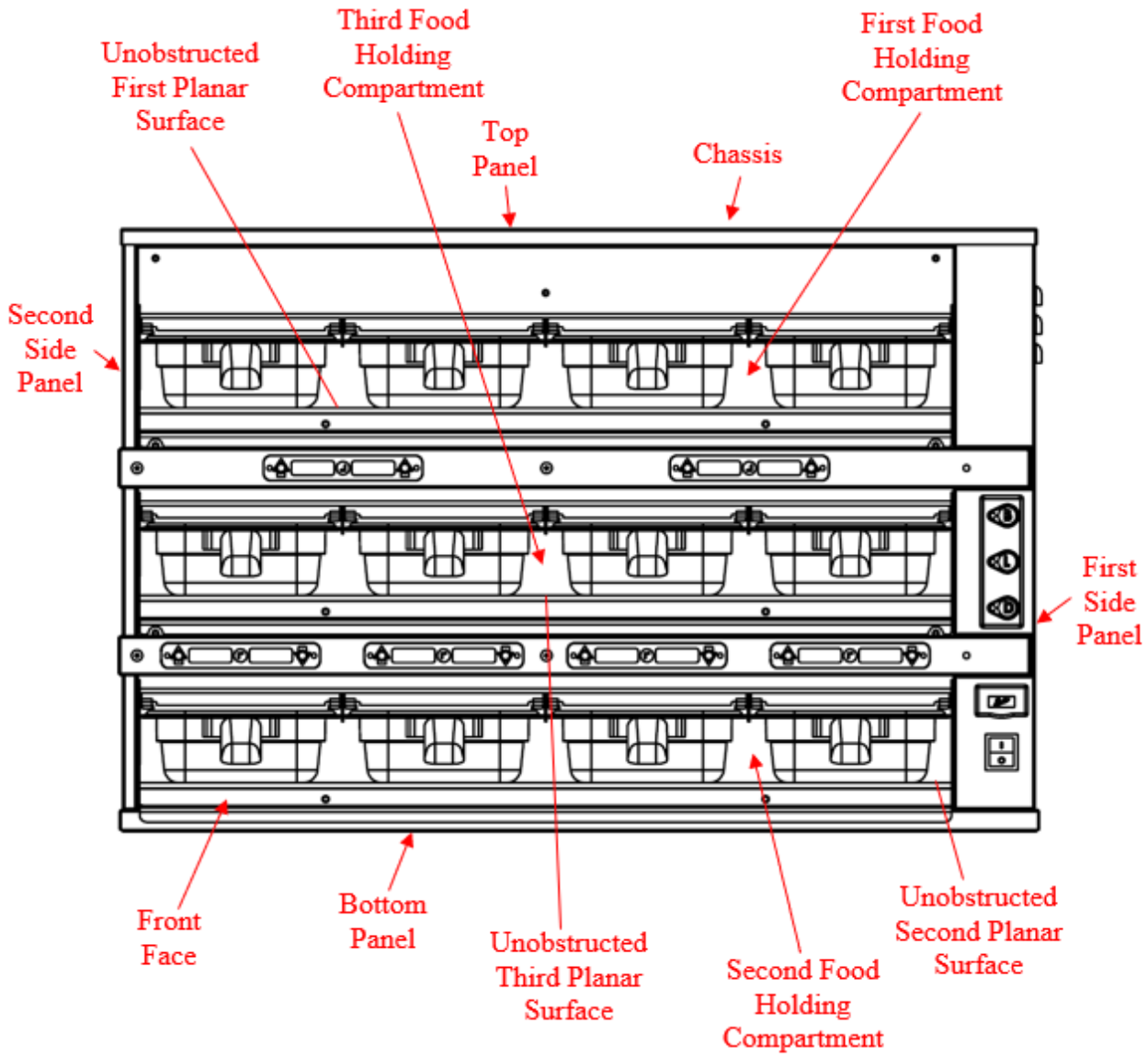
In this ground, claims 1-20 are obvious per Grounds 1-8, with limitations/claims 1.a.1, 1.a.3, 1.a.6, 1.a.7, 3.a.3, and 12 further being obvious as demonstrated below. EX1003: ¶¶519-520.



EX1005: 8.



EX1005: 8 (modified-rear).


Unobstructed First Planar Surface
Third Food Holding Compartment
Top Panel
Chassis
First Food Holding Compartment
Second Side Panel
First Side Panel
Front Face
Bottom Panel
Unobstructed Third Planar Surface
Second Food Holding Compartment
Unobstructed Second Planar Surface

EX1005: 9.