SERVICE MANUAL

R/A/G-Series Reach-In & Pass-Thru Heated Cabinet Service Manual

This manual is applicable for all models using:

R & A Series Reach-In & Roll-In*
R & A Series Pass-Thru & Roll-Thru*

2017 - PRESENT MODELS

Please Note: This manual is intended for use with the above referenced equipment manufactured in or after 2023. To obtain a copy of the correct Service Manual to support the same products manufactured prior to this date, please contact Traulsen Service at (800) 825-8220.

4401 Blue Mound Road Fort Worth, Texas 76106 (USA)
Phone: 800.825.8220 | E-mail: service@traulsen.com | Website: traulsen.com
Form Number: TR00399 | Revision Date: 10-2025

Hours of Operation: Monday - Friday 7:30 a.m. - 4:30 p.m. (CST)

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1. Introduction

Traulsen provides this manual as an aid to the service technician in installation, operation, and maintenance. When used properly, this service manual can help the service technician maintain, troubleshoot, and diagnose the majority of issues that may occur. While we believe that most aspects of service are covered in this manual, should you encounter a condition not addressed, please contact:

ITW Refrigeration
Traulsen
4401 Blue Mound Road
Fort Worth, Texas 76106

Attn: Service Department
Call for Technical Support:
Tel: (800) 825-8220
Email: service@traulsen.com | p19parts@traulsen.com

IMPORTANT: To improve your service communication experience, be sure to have the following available when contacting technical support:

Serial Number
Model Number
A detailed description of the issue

1.1 The Serial Tag

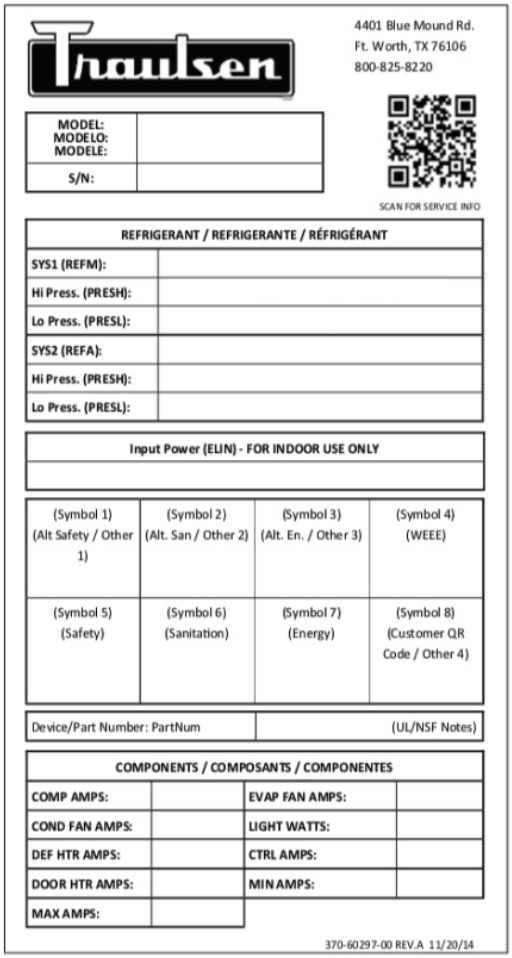

Traulsen
4401 Blue Mound Rd.
Ft. Worth, TX 76106
800-825-8220
MODEL:
MODELO:
MODELE:
S/N:
SCAN FOR SERVICE INFO
REFRIGERANT / REFRIGERANTE / RÉFRIGÉRANT
SYS1 (REFM):
Hi Press. (PRESH):
Lo Press. (PRESL):
SYS2 (REFA):
Hi Press. (PRESH):
Lo Press. (PRESL):
Input Power (ELIN) - FOR INDOOR USE ONLY
(Symbol 1) (Alt Safety / Other 1)
(Symbol 2) (Alt. San / Other 2)
(Symbol 3) (Alt. En. / Other 3)
(Symbol 4) (WEEE)
(Symbol 5) (Safety)
(Symbol 6) (Sanitation)
(Symbol 7) (Energy)
(Symbol 8) (Customer QR Code / Other 4)
Device/Part Number: PartNum
(UL/NSF Notes)
COMPONENTS / COMPOSANTS / COMPONENTES
COMP AMPS:
EVAP FAN AMPS:
COND FAN AMPS:
LIGHT WATTS:
DEF HTR AMPS:
CTRL AMPS:
DOOR HTR AMPS:
MIN AMPS:
MAX AMPS:
370-60297-00 REV.A 11/20/14

Fig. 1.1 Sample Serial Tag

1.2 Serial Tag & Location

The serial tag is a permanently affixed label on which is recorded vital electrical and refrigeration data about your Traulsen product, as well as the model and serial number. This tag is in the upper left interior compartment of all R&A-Series refrigerator and freezer models.

1.2.1 Reading the Serial Tag

Model = The model number of your Traulsen unit

Serial (S/N) = The permanent ID number of your Traulsen unit

Refrigerant SYS1 = System 1 refrigerant type used and Refrigerant charge

Design Pressure = System 1 high and low pressure

Refrigerant SYS2 = System 2 refrigerant type used and Refrigerant charge

Design Pressure = System 2 high and low pressure

Volts = Voltage

Hz = Cycle

PH = Phase

Total Current = Maximum amp draw

Minimum Circuit Amps = Minimum circuit Ampacity

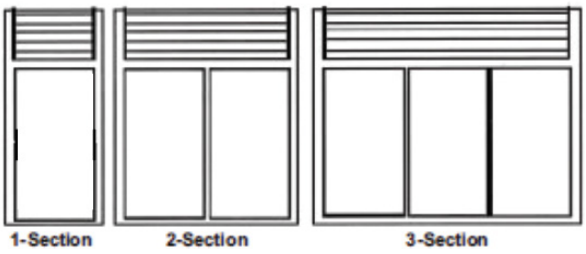
Lights = Light wattage

Agency Labels = Designates agency listings

Components = Component ratings

NOTE: Design pressure is the maximum pressure system components can handle and NOT the operating pressure.

1.3 Understand R&A-Series Model Numbers



R = Refrigerated Compartment
F = Freezer Compartment

II. b - MODEL DESIGNATIONS:
The first letter indicates the series, "R" or "A"
R = Stainless Steel Exterior & Interior
A = Stainless Steel Exterior & Anodized Aluminum Interior

*****All parts are optional, based on make/model*****
****(Part Numbers are subject to change)****

1.4 Reading Traulsen Serial Number

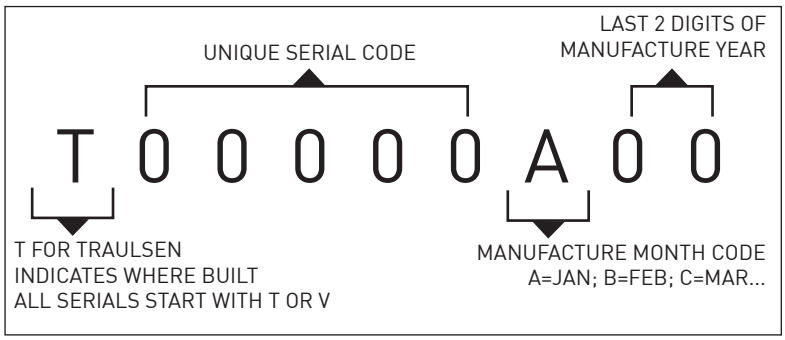


Fig. 1.4a
Format If Manufactured Before APRIL 2021

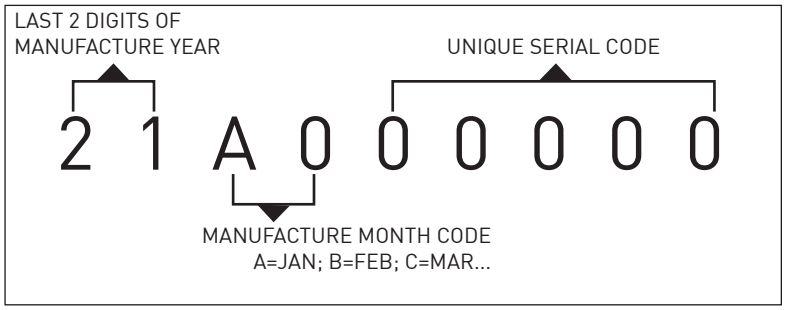


Fig. 1.4b
Format If Manufactured After APRIL 2021

1.5 Hot-Food Heated Cabinet

1.5.1 Hot Food Terminology

Convection Heating:
Hot food holding units rely on forced-air convection to distribute heat evenly. A fan circulates air across the heater element, allowing consistent temperatures to be maintained throughout the cabinet.

Setpoint Temperature:
This is the target temperature programmed into the controller (typically factory-set between 90-130F). Once reached, the controller modulates the heating element to maintain this condition automatically. Temps can be set between 130-180F.

Air Probe Sensor:
Monitors internal air temperature and communicates with the control board. If the cabinet sensor is misreading or out of calibration, the unit may overheat or fail to reach temperature, causing food safety issues.

Thermal Fuse:
A non-resettable safety device designed to open the heating circuit in the event of over-temperature conditions (typically above 220°F). A blown fuse will interrupt heater function and should be tested for continuity during service calls.

Tubular Heater Element:
The primary heating component. It converts electrical energy into heat. Voltage should be verified across the heater terminals during a call for heat to confirm functionality (typical voltage: 120V or 208-240V depending on the model).

Fan Operation:
Fans distribute heat evenly inside the cabinet. During a heat call, voltage to the fan (typically 120V–220V) should be confirmed. Fan failure can result in temperature stratification and poor heat recovery.

Door Switch Function:
This switch disables fans when the door is open to prevent hot air loss. It also activates the interior light. If the switch fails or shorts, fans may remain off or cycle intermittently. Fan and light function should be verified by opening/closing the door.

Display Icons:
Icons on the control display represent real-time relay calls. A lit fan or heat icon indicates that the respective relay is energized and voltage should be present at the corresponding control board terminal.

Voltage Verification:
During active calls (when icons are lit), test for voltage at the relay terminals:
Heating Element: Should show rated input voltage.
Fans: Should read 120–220V depending on the model.
If voltage is present but the component does not operate, suspect an open circuit or failed device.

Power Toggle Switch:
Many models include a manual toggle switch behind the louver or access panel. Ensure the switch is set to ON for the control board to function. Technicians should always verify this switch before proceeding with diagnostics.

Relay Control Module (Power Board):
This board receives signals from the display/control and sends power to the fans, heater, and light. When troubleshooting, voltage at relay terminals should correspond with active icons on the display. Always reference wiring diagrams to confirm terminal locations and expected outputs.

1.6 Shipping and Assembly

1.6.1 Location

Select a proper location for your Traulsen unit, away from extreme heat or cold. Allow enough clearance between the unit and the side wall in order to make use of the door stay open feature at 120° (self-closing feature operates up to 90°). The door(s) must be able to open a minimum of 90° in order to make use of the maximum clear door width available.

1.6.2 Packaging

All Traulsen units are shipped from the factory bolted to a sturdy wooden pallet and packaged in a durable cardboard container.

Traulsen exterior stainless steel surfaces have a protective vinyl covering to prevent scratching during manufacturing, shipping and installation. After the unit is installed in place of service, remove and discard the covering from all surfaces.

To remove the wooden pallet, first if at all possible, we suggest that the cabinet remain bolted to the pallet during all transportation to the point of final installation. The bolts can then be removed with a 3/4" socket wrench. Avoid laying the unit on its front, side or back for removal of the pallet.

NOTE: DO NOT LAY THE UNIT ON ITS SIDE DURING INSTALLATION

1.6.3 Installing Legs or Casters

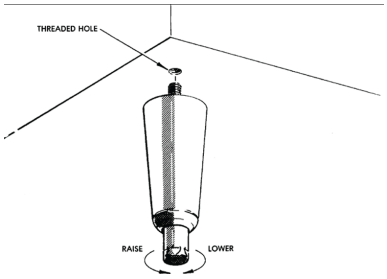
6" High stainless steel legs are supplied standard for all Traulsen reach-in and pass-thru units. Casters in lieu of legs are available as an optional accessory for the same models. These are shipped from the factory packed inside a cardboard box which is strapped to one of the shelves. Remove the nylon strap and open the box, it should contain either four (4) legs or four (4) casters and sixteen (16) bolts.

THE CABINET MUST BE BLOCKED AND STABLE BEFORE INSTALLING LEGS OR CASTERS.

⚠ WARNING

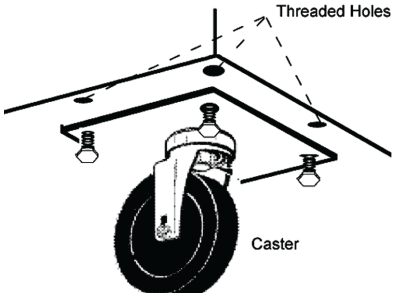
To install the legs or casters, first raise and block the reachin a minimum of 7" from the floor. For installing legs, thread the legs into the threaded holes on the bottom of the cabinet. Be certain that all legs are tightly secured (legs and casters should be tightened to 300 inch/pounds, max). When the unit is set in its final position, it is important for proper operation that the unit be level. The legs are adjustable for this purpose; turn the bottom of the leg counter- clockwise to raise it, clockwise to lower it. Level the unit from front to back as well as side to side in this manner, using a level placed in the bottom of the cabinet.

Fig 1



Please note that Traulsen units are not designed to be moved while on legs. If the unit requires moving, a pallet jack or forklift should be used to prevent damage. For installing casters, the casters are "plate" type, and require the use of four 4) bolts each to secure them firmly to the cabinet bottom at each corner. The caster bolts are tightened using a 1/2" socket wrench.

Fig 2



Proper installation and use of legs and casters on upright cabinets are essential to ensure stability, mobility, and safety during usage, repositioning, and servicing.
Here is an in-depth guide to the installation and usage of legs and casters.

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These are shipped from the factory packed inside a cardboard box which is strapped to one of the shelves. Remove the nylon strap and open the box, it should contain either four 4) legs or four 4) casters and sixteen 16) bolts.

THE CABINET MUST BE BLOCKED AND

STABLE BEFORE INSTALLING LEGS OR CASTERS.

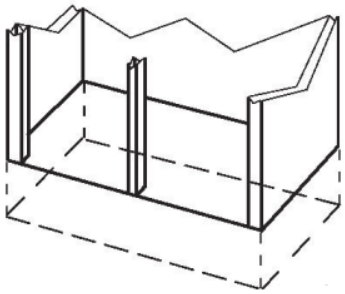
To install the legs or casters, first raise and block the reachin a minimum of 7" from the floor. For installing legs, thread the legs into the threaded holes on the bottom of the cabinet **(see figure 2)**. **Be certain that all legs are tightly secured legs and casters should be tightened to 300 inch/pounds,max)**. When the unit is set in its final position, it is important for proper operation that the unit be level. The legs are adjustable for this purpose; turn the bottom of the leg counter- clockwise to raise it, clockwise to lower it. Level the unit from front to back as well as side to side in this manner, using a level placed in the bottom of the cabinet. **Please note that Traulsen units are not designed to be moved while on legs. If the unit requires moving, a pallet jack or forklift should be used to prevent damage. For installing casters, the casters are "plate" type, and require the use of four 4) bolts each to secure them firmly to the cabinet bottom** at each corner (see figure 2). The caster bolts are tightened using a 1/2" socket wrench.

ROLL-IN MODEL INSTALLATION

Roll-in cabinets set on the floor require the floor area to be flat and level. In addition, after the cabinet is set in place, sealant should be used around the perimeter of the base to comply with National Sanitation Foundation requirements (see figure 3). After sealing the unit, the enclosed ramp should then be installed

SEALING THE BASE OF ROLL-IN MODELS

Fig 3



A sealant must be used around the perimeter of the base of cabinet as shown to fully comply with sanitary requirements.

A recommended sealant is Dow Corning Silastic RTV

A stainless steel threshold ramp(s) is included to facilitate roll-in racks. It is shipped wrapped in brown paper and secured to the rack guides inside the cabinet. To secure it in place, remove the two thumb screws in the breaker strip near the bottom door opening. Next, loosen the thumb screws located along the floor at the threshold. Place the ramp(s) on top of the loosened thumb screws and secure tabs on each end to breaker strips with thumb screws previously removed. After installing the ramp(s), it too should be sealed to the floor. Bumper strips are secured to the back of roll-in models with thumb screws. Loosen these and make them finger tight to conform with the requirements of the National Sanitation Foundation (NSF).

1.6.4 Shelf Pins
The unit is supplied with shelves and shelf pins installed. Check all shelf pins to assure they are tightened down as they may have come loose during shipping. Rotate the pins clockwise until they are secured against the side of the cabinet.

1.6.5 Cord & Plug
Most self-contained models are supplied with a cord & plug attached. It is shipped coiled at the top of the cabinet, secured by a nylon strip. Select only a dedicated electrical outlet with grounding plug for power source. **NOTE: Do not under any circumstances, cut or remove the round grounding prong from the plug, or use an extension cord.**

1.6.6 Power Supply
The supply voltage should be checked prior to connection to be certain that proper voltage for the cabinet wiring is available **(refer to the serial tag to determine correct unit voltage)**. Make connections in accordance with local electrical codes. Use qualified electricians.
Use of a separate, dedicated 20Amp circuit is required. Size wiring to handle indicated load and provide necessary over current protector in circuit (see amperage requirements on the unit's serial tag).

1.6.7 Wiring Diagram
Refer to the wiring diagram for any service work performed on the unit. Contact Traulsen Service at (800) 825-8220, and provide the model and serial number.

1.6.8 Clearance
In order to assure optimum performance, the condensing unit of your Traulsen unit MUST have an adequate supply air for heating purposes. Therefore, the operating location must either have a minimum of 12" clearance overhead of the condensing unit or allow for unrestricted air flow at the back of the unit. Clearance of at least 12" above is required in order to perform certain maintenance tasks.

1.6.9 Cleaning the Exterior
Exterior stainless steel should be cleaned with warm water, mild soap and a soft cloth. Apply with a dampened cloth and wipe in the direction of the metal grain.

Avoid the use of strong detergents and gritty, abrasive cleaners as they may tend to mar and scratch the surface. Do NOT use cleansers containing chlorine, this may promote corrosion of the stainless steel.

Care should also be taken to avoid splashing the unit with water, containing chlorinated cleansers, when mopping the floor around the unit.
For stubborn odor spills, use baking soda and water (mixed to a 1 TBSP baking soda to 1 pint water ratio).

1.6.10 Cleaning the Interior
For cleaning both stainless steel and anodized aluminum interiors, the use of baking soda as described in section "1.6.13" is recommended. Use on breaker strips as well as door gaskets. All interior fittings are removable without tools to facilitate cleaning.

1.6.11 Adjusting the Shelves
For shelves mounted on pins, first select the desired location and remove the white plastic covers in the interior back and sides by rotating them counter-clockwise. Remove the shelf pins by rotating them counter-clockwise. Install the pins in the desired location by rotating clockwise. Make sure the pin is securely tightened down. Do not over tighten. Slide the shelf into its new position, and replace the white plastic covers into the holes vacated by the shelf pins.

1.6.12 Replacing the light Bulb
All Traulsen R&A Series models are supplied with LED lighting with the exception of heated units. Optional tube style display lighting is available (except for sliding glass door models for which fluorescent lights are supplied standard).

The standard LED bulb is a 115 or 230 volt / 4-watt, T-6 intermediate clear refrigerator lamp. It is mounted at the top front of the cabinet at the center and is located behind a plastic light cover on refrigerator and freezer model.

Heated units (RHF/AHF/RIH/AIH/RDH/ADH/RIDH/AIDH) are equipped with a 115 or 230 volt / 25-watt, T-6 incandescent bulbs. LEDs have not evolved enough yet to take the heat. This bulb is shatterproof because these models do not include a plastic light cover.

To replace the bulb, first remove the light cover (if so equipped). This can be accomplished by squeezing it together on both sides until it comes free. Replace the light bulb, then squeeze both sides of the light cover together and replace in its original position.

1.6.13 Troubleshooting Guide

Before calling for service, please check the following:

Is the electrical cord plugged in?

Is the fuse OK or circuit breaker on?

Clean condenser coil?

Is the power switch on?

If after checking the above items and the unit is still not operating properly, please contact an authorized Traulsen service agent.

A complete list of authorized service agents was provided along with your Traulsen unit. If you cannot locate this, you may also obtain the name of a service agent from the Tech Service page at traulsen.com. If service is not satisfactory, please contact our in-house service department at:

800-825-8220

Traulsen **4401 Blue Mound Road**
Fort Worth, TX 76106
800.825.8220

Traulsen reserves the right to change specifications or discontinue models without notice.

1.6.14 Gasket Integrity & Air Seal Checks – Heated Cabinets

Maintaining a proper air seal is critical in heated cabinets to ensure even temperature distribution and energy efficiency. Gaskets form the primary barrier between the heated interior and ambient external air. Any compromise in gasket performance can lead to heat loss, extended recovery times, difficulty maintaining setpoint (SP), and premature failure of internal components due to moisture intrusion.

Why Gasket Health Matters

Air Leakage allows ambient air and moisture to enter the cabinet, disrupting the heating cycle.

Moisture Introduction can condense on internal surfaces or damage electrical components over time.

Setpoint Fluctuations may occur when the heater continuously compensates for temperature loss due to poor sealing.

Energy Waste is increased as the unit works harder to maintain the programmed temperature.

Gasket Inspection Guidelines

During routine service or preventive maintenance, perform the following checks:

Visual Inspection: Check for cracks, tears, gaps, or deformation along the door gasket. Pay attention to the corners where failure often begins.

Compression Test: Close the door on a slip of paper or dollar bill. Attempt to pull it out. If it slides out with little to no resistance, the gasket is not sealing properly at that point.
Replace Damaged Gaskets Immediately using Traulsen OEM parts to ensure proper fit and sealing pressure. After gasket replacement, instruct users to keep the doors closed for at least one hour to allow the gasket to reshape under tension.
Door frame heat (if equipped) should also be checked to ensure it is functioning properly to prevent condensation around the gask**et.**

Reminder:

A failed gasket may not trigger an error code, but it will directly affect temperature performance and longevity of internal components. Ensure all doors close evenly and the cabinet holds temperature without excessive runtime.

Proper Usage and Regular Checks

Check Seals and Gaskets

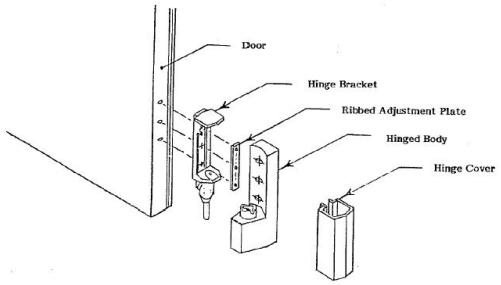
- Door Seal: Inspect door seals and gaskets for any signs of wear or damage, and replace if necessary to maintain an airtight seal.
- Proper Closure: Ensure doors close properly to prevent air leakage and maintain optimal internal temperatures.

Airflow

Unobstructed Venting : Ensure that the model has proper ventilation are not blocked allowing proper airflow, adequate space around the unit ensures proper airflow and efficient operation

1.6.15 Door Hinge Adjustment

Proper adjustment of doors and hinges is essential to ensure they close correctly and maintain an airtight seal. This prevents energy loss, maintains internal temperature, and extends the lifespan of the refrigeration unit. Misaligned doors can cause air leaks, reduce efficiency, and increase energy consumption. Therefore, regular inspection and adjustment are crucial for optimal performance.



Ensure the unit is powered off and all safety protocols are followed.

- Gather necessary tools: screwdriver, and safety gloves.
- Initial Inspection:
- Check the door alignment and how it closes. Does it seal?
- Address any gaps or misalignment.

Removing the Door:

- Locate the safety screw at the bottom of each hinge.
- Use a screwdriver to remove the safety screw. Keep the screws safe for reassembly.
- Carefully lift the door off the cabinet.

Adjusting the Hinges:

- Identify the three screws holding the hinge bracket to the cabinet.
- Loosen these three screws slightly. Do not remove them entirely.

Adjust the hinge bracket:

- Up or Down: Move the hinge bracket vertically to align the door height.
- Side to Side: Adjust horizontally to correct the door's lateral alignment.
- Once aligned, tighten the three screws securely.

Reinstalling the Door:

- Place the door back onto the cabinet hinges.
- Replace the safety screws at the bottom of the hinges.
- Test the door by opening and closing it several times to ensure it moves freely and closes properly.

The dollar bill test is a simple method used to check if a refrigerator door seal is functioning properly. To perform the test, place a dollar bill halfway into the refrigerator door and close it. Gently tug on the bill; if it slides out easily without resistance, this indicates that air may be escaping, and the door seal may need to be repaired or replaced. A good seal should hold the bill firmly in place, preventing cold air from escaping and ensuring efficient operation of the refrigerator

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Lock Keeper Adjustment

Adjusting the lock keeper is vital for ensuring the door locks securely. Proper adjustment prevents unauthorized access and maintains the integrity of the unit's contents. A correctly adjusted lock keeper ensures the door remains closed, preserving the internal environment and security of the unit. Regular maintenance and adjustment help in prolonging the life and reliability of the locking mechanism.

Why Lock Keeper Adjustment Matters

Over time, door components naturally experience wear from repeated use, vibration during operation, and temperature fluctuations. A misaligned lock keeper can cause the door to close improperly, resulting in air leaks, temperature loss, or premature wear to the locking mechanism. This can lead to increased energy consumption and potential product spoilage.

Environmental factors—such as frequent door openings, heavy traffic areas, or accidental impact—can accelerate misalignment. During scheduled maintenance or when troubleshooting inconsistent temperature readings, always inspect the lock keeper for proper alignment and wear. Early detection and adjustment help maintain optimal performance, protect product integrity, and avoid costly repairs.

Ensure the unit is powered off and follow all safety protocols.

Necessary tools: Screwdriver (Phillips) and safety gloves.

Removing the Lock Keeper:

- Locate the two screws holding the lock keeper in place.
- Use a screwdriver to remove these screws and set the lock keeper aside.

Adjusting the Bracket:

- Locate the two screws in the bracket mounted on the cabinet.
- Loosen these screws slightly. Do not remove them entirely.
- Adjust the bracket side to side:
- Move the bracket to align the lock keeper with the lock bolt.
- Once aligned, tighten the screws in the bracket securely.

Reinstalling the Lock Keeper:

- Place the lock keeper back into position.
- Secure it with the two screws previously removed.

Final Check:

Test the lock by closing the door and engaging the lock bolt.

Ensure the lock bolt catches the lock keeper and the door locks securely.

By following these detailed procedures, technicians can ensure that doors and locks are properly adjusted, maintaining the functionality and security of the refrigeration unit.

1.6.16 Door Switch Location, Operation and service procedures

Component Overview

On hot food units, each door is equipped with a door switch assembly designed to control internal fans, lights, and in some cases, auxiliary heating functions. The switch is located directly behind the top hinge of each door, positioned for immediate activation as the door moves.

Actuator Pin Function

Within the hinge assembly is an actuator pin. This pin physically interacts with the door switch plunger to trigger its electrical contacts. The design ensures reliable, consistent engagement:

Door Open: The actuator pin moves away from the switch, releasing the plunger. This opens the fan circuit—stopping internal airflow to reduce heat loss—while closing the light circuit to illuminate the cabinet interior.

Door Closed: The actuator pin depresses the plunger fully, restoring fan operation to maintain even heat distribution and switching off the interior light to conserve energy.

Switch Type

These units use a normally closed switch configuration for the fan circuit. This means the circuit remains complete when the door is closed and is broken when the door is opened. The light circuit operates inversely, completing when the door is open and breaking when the door is closed.

Inspection and Preventative Maintenance

Routine inspection of the door switch and actuator pin helps prevent failures that could lead to temperature instability or energy inefficiency.

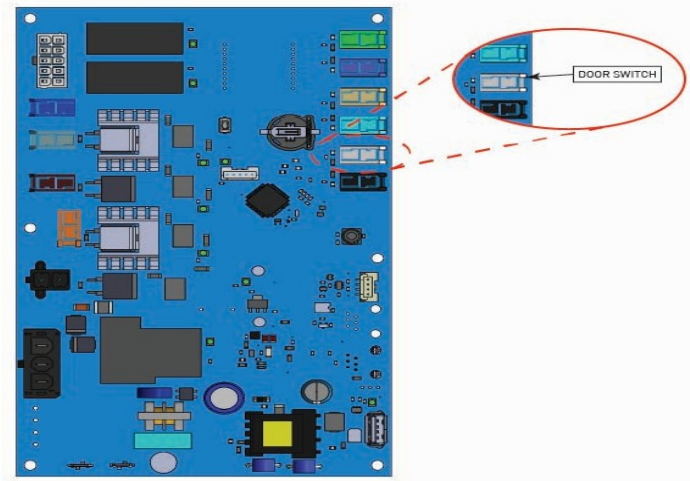
- Check for visible cracks, corrosion, or deformation on the switch housing.
- Ensure actuator pin moves smoothly without binding.
- Confirm that hinge alignment allows for proper pin-to-switch engagement.
- Inspect wiring insulation for wear, fraying, or signs of overheating.
- Apply a small amount of food-safe lubricant to hinge components if sticking is observed (avoid direct contact with the switch).

Common Symptoms of a Faulty Door Switch malfunctioning door switches can cause multiple operational issues:

- Fan runs continuously with the door open.
- Interior light fails to illuminate when door is opened.
- Unit experiences temperature fluctuations despite normal heating element operation.
- Intermittent fan cycling when door is stationary, caused by poor pin engagement.
- Unit is not heating properly due to lack of airflow

Diagnostic Tip – Isolating the Door Switch from the Circuit
If fan operation is questionable, isolate the door switch input from the main-board to test direct fan performance. This is commonly done via the FNA (Fan Override) parameter on NexGen controls
NexGen: Set FNA = NOA to override the door switch and force fan operation regardless of door position.
This setting allows the technician to test fan circuits independently of door switch feedback.

Voltage Verification at the Control Board
To confirm proper fan operation:
Access the main control board and locate the fan voltage output terminal **(typically grey connection).**
Measure voltage across terminals when the fans are called—typically 120V or 220V depending on the application.
If voltage is present but fans are not operating, test directly at the fan harness or terminals for continuity or physical blockage.
If no voltage is present, but the display or program should be calling for fans, the fault likely resides in the control board or door switch logic.



1.6.17 Power Operation and Daily Use

To power on the unit, press and hold the Unlock/Power key ("O") until the display begins to show the cabinet temperature. Release the button once the temperature is displayed.

To power off the hot food unit, press and hold the Unlock/Power key ("O") until the display screen shows OFF.

When the displayed temperature appears (e.g., 70°F), the system automatically engages the heating elements and circulation fans based on the programmed setpoint. This ensures the cabinet begins heating to reach and maintain the proper operating temperature for optimal food safety and performance.
Proper daily operation ensures that the heating system, fans, and temperature controls function as designed, maintaining consistent performance and preventing product quality issues.

Relay Indicator Icons – Control Logic

The illuminated icons on the display correspond to active relay outputs triggered by the control board. Each icon reflects the current state of specific functions—such as evaporator fans or the heating element. These outputs are governed by internal setpoint logic and relay parameters, which are pre-programmed at the factory and optimized for hot-holding performance.
When the unit temperature deviates below the target setpoint, the control logic energizes the heating relay, as indicated by the corresponding icon. Likewise, fan operation is displayed and triggered based on programmed thresholds, door switch status, and fan override parameters.
Technicians can reference these visual indicators during diagnostics to confirm whether the control board is actively commanding the associated components.

Traulsen Technical Guidance for Field Technicians

Power and Display Verification
Ensure the unit is receiving proper line voltage per nameplate specification. Use a multimeter to confirm correct supply voltage at the terminal block. Inspect the power cord, junction box, and breaker for signs of electrical failure or tripped circuits.

If the unit is powered, confirm that the control display is active. A blank or non-responsive display may indicate a control failure or loss of power. If the display is active, verify that the cabinet is not in "OFF" mode and that the setpoint is within standard heating parameters.

Temperature Setpoint and Actual Temperature Validation

Check the programmed setpoint on the controller. Standard hot food units are factory set to a temperature between 135°F and 140°F. Use an independent thermometer or thermocouple to measure actual cabinet temperature and compare it to the controller reading. Significant discrepancies between the two may indicate a sensor failure or calibration issue.

Heating Element Circuit Diagnosis

If the display indicates the cabinet is calling for heat (heating icon is lit), verify voltage at the heating element terminals using a multimeter. If voltage is present and the element is not producing heat, power down the unit and test the element for continuity. Resistance should fall within the expected range based on the element's wattage. An open or shorted reading indicates a failed heating element requiring replacement.

Thermal Fuse Inspection

The thermal fuse is a critical safety component designed to cut power to the heating circuit in the event of an overheat condition. If the cabinet is not heating and voltage is not present at the heating element terminals (despite a heating call on the display), isolate and test the thermal fuse for continuity using a multimeter.

If continuity is present, the fuse is operational.
If the fuse reads open, it has tripped and must be replaced. Always investigate the root cause (e.g., excessive ambient heat, failed sensor, obstructed airflow) before replacing the fuse to prevent recurrence.
The thermal fuse is typically located inline with the heating element circuit

Fan Operation and Air Circulation

During a heating call, evaporator (circulation) fans must operate to evenly distribute heat throughout the cavity. **Verify voltage at the fan outputs on the control board**.
If voltage is present at the board, **inspect fan motor terminals and wiring harness**. If the fan is not operating despite receiving voltage, **test motor windings for continuit**y.
Replace motor if found to be open or mechanically seized.
Ensure the cabinet has **no obstructions to airflow** and that internal baffles are properly installed to support circulation patterns.

If the display icon for fans is lit, verify voltage at the fan output terminals on the control board (typically gray wires). Depending on model configuration, voltage should measure 120V or 220V. If voltage is present at the control board but not registering at the fan connector, inspect wiring continuity and connector integrity.

Technical Assistance

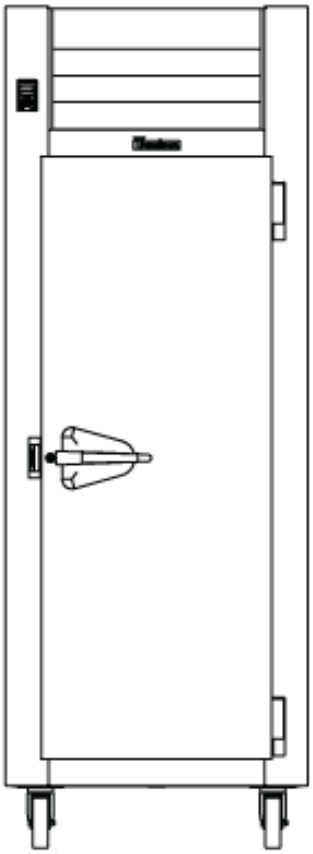
If all diagnostic steps have been performed and the issue remains unresolved, contact Traulsen Technical Support for advanced troubleshooting assistance.

Contact Information:
800-825-8220
service@traulsen.com

1.7 Specifications

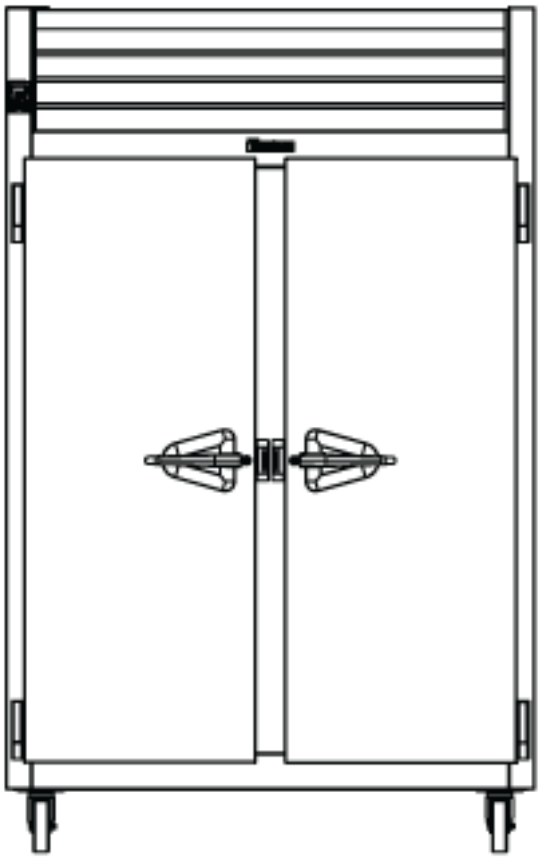
DIMENSIONS	1 Section Cabinet	2 Section Cabinet	3 Section Cabinet
Height - Overall on 6" Casters	83-7/16" (211.9 cm)	83-3/8" (211.9 cm)	83-7/16" (211.9 cm)
Width	29 7/8" (75.9 cm)	52-1/8" (132.4 cm)	86 1/8" (218.8 cm)
Depth	35 1/16" (89.1 cm)	35" (88.8 cm)	35 1/8" (89.2 cm)
Net Capacity cu. ft.	24.0	44.0	77.45

Table 1.7
TRAULSEN Cabinet Specifications



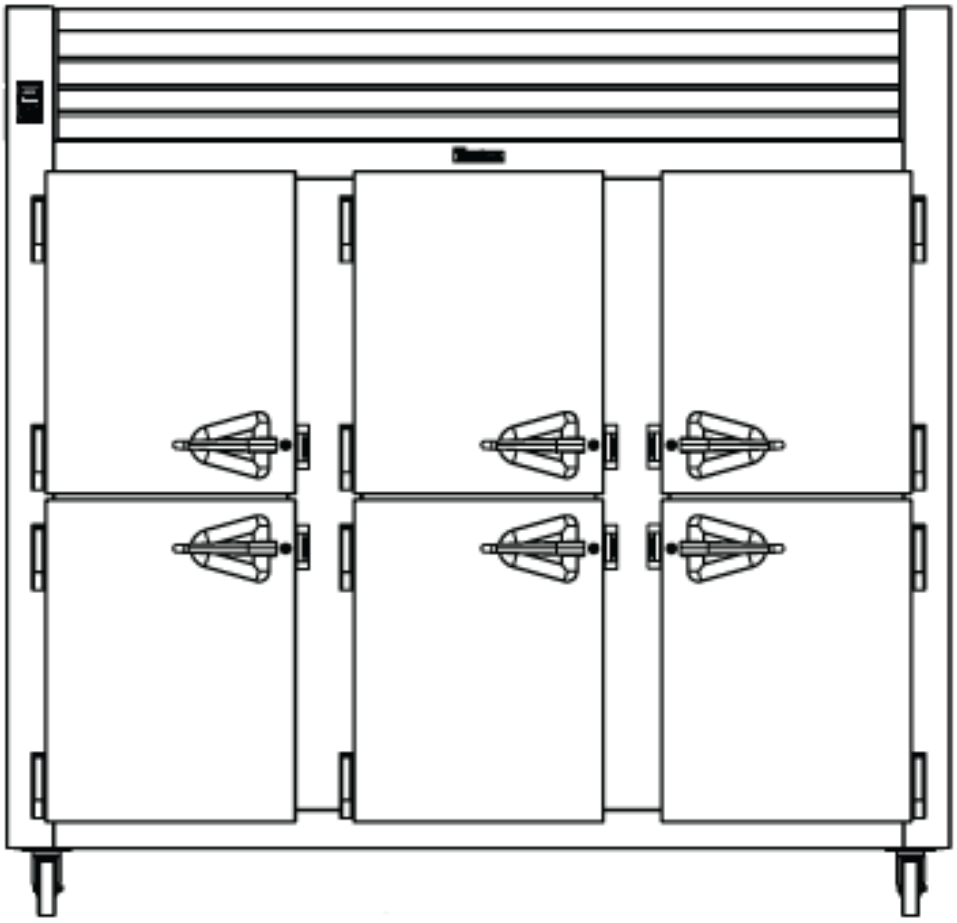
FRONT VIEW
ONE SECTION
CABINET

Fig. 1.7a
Front View of 1 Section Cabinets



FRONT VIEW
TWO SECTION
CABINET

Fig. 1.7b
Front View of 2 Section Cabinets



FRONT VIEW
THREE SECTION
CABINET

Fig. 1.7c
Front View Of 3 Section Cabinets

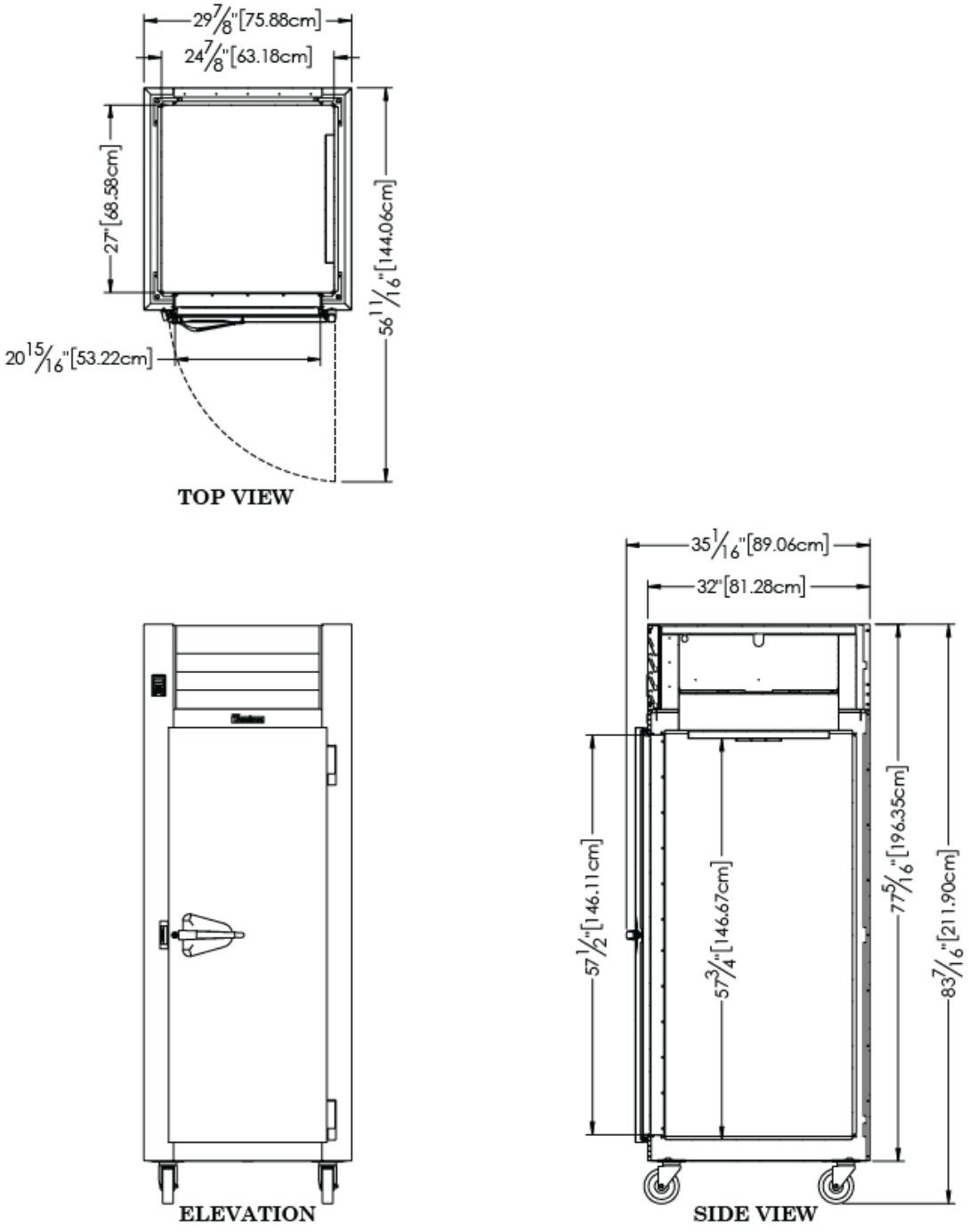


Fig. 1.7d
1 Section Cabinet

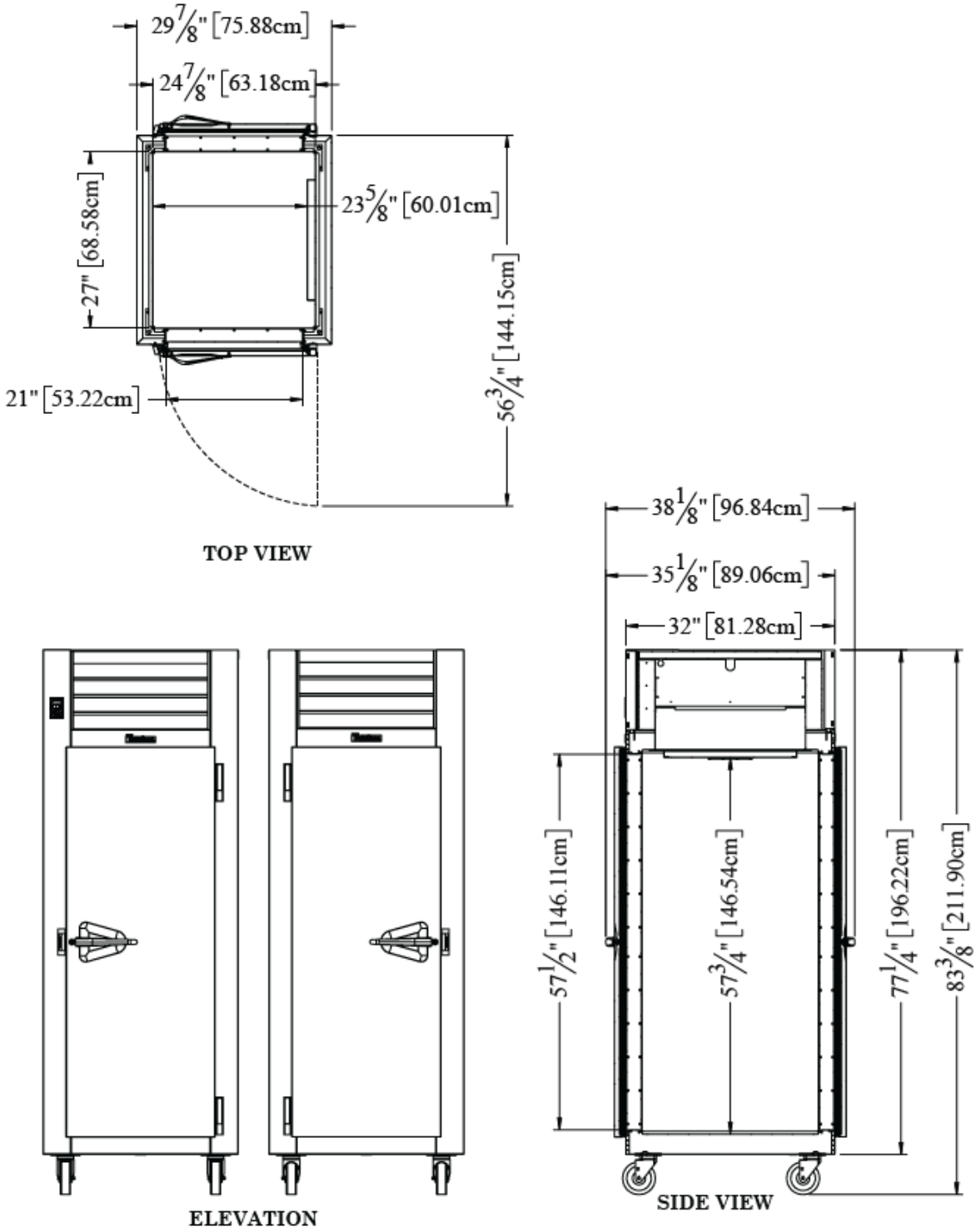


Fig. 1.7e
1 Section Pass Thru Cabinet

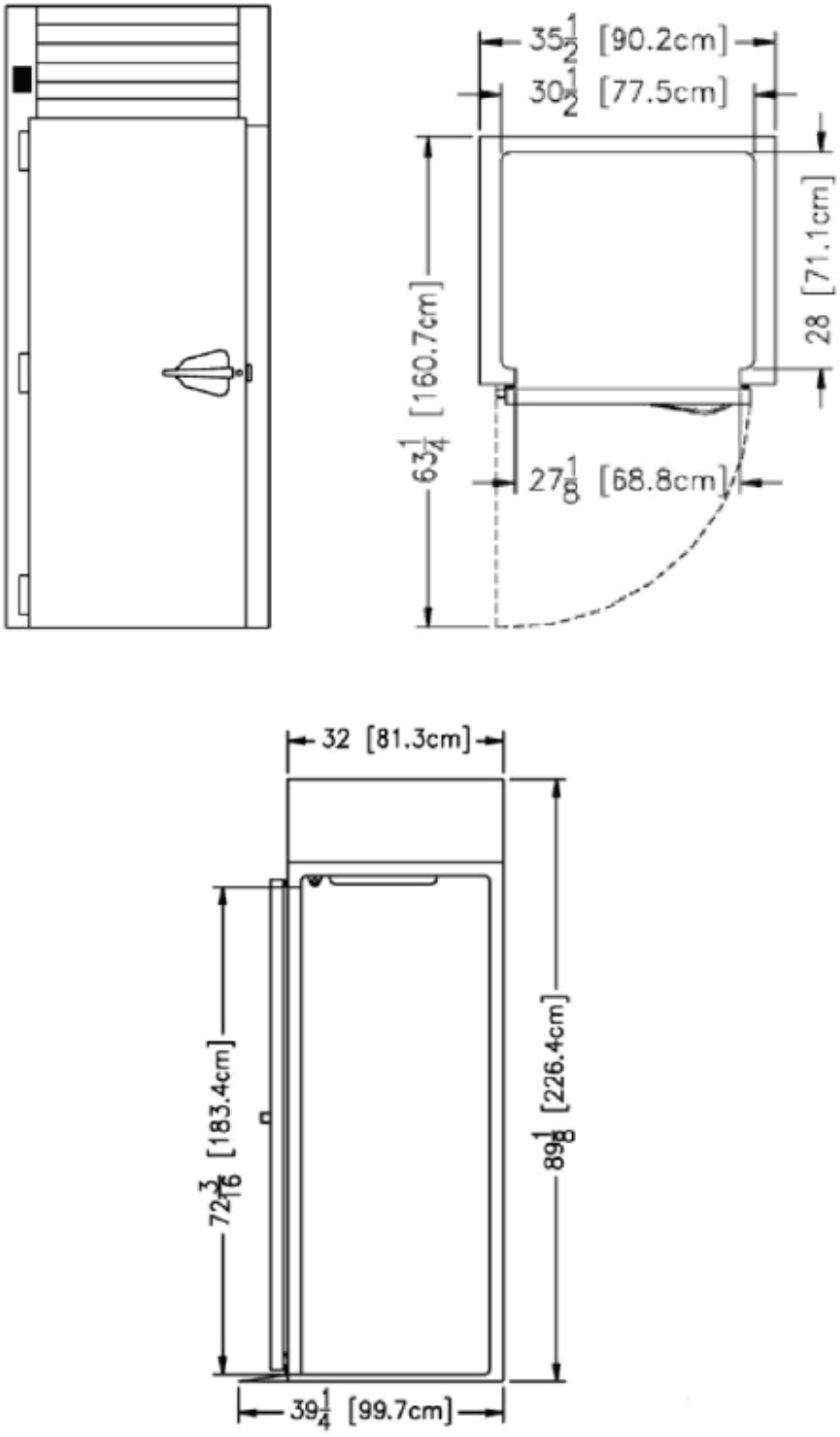


Fig. 1.7f
1 Section Roll in Cabinet

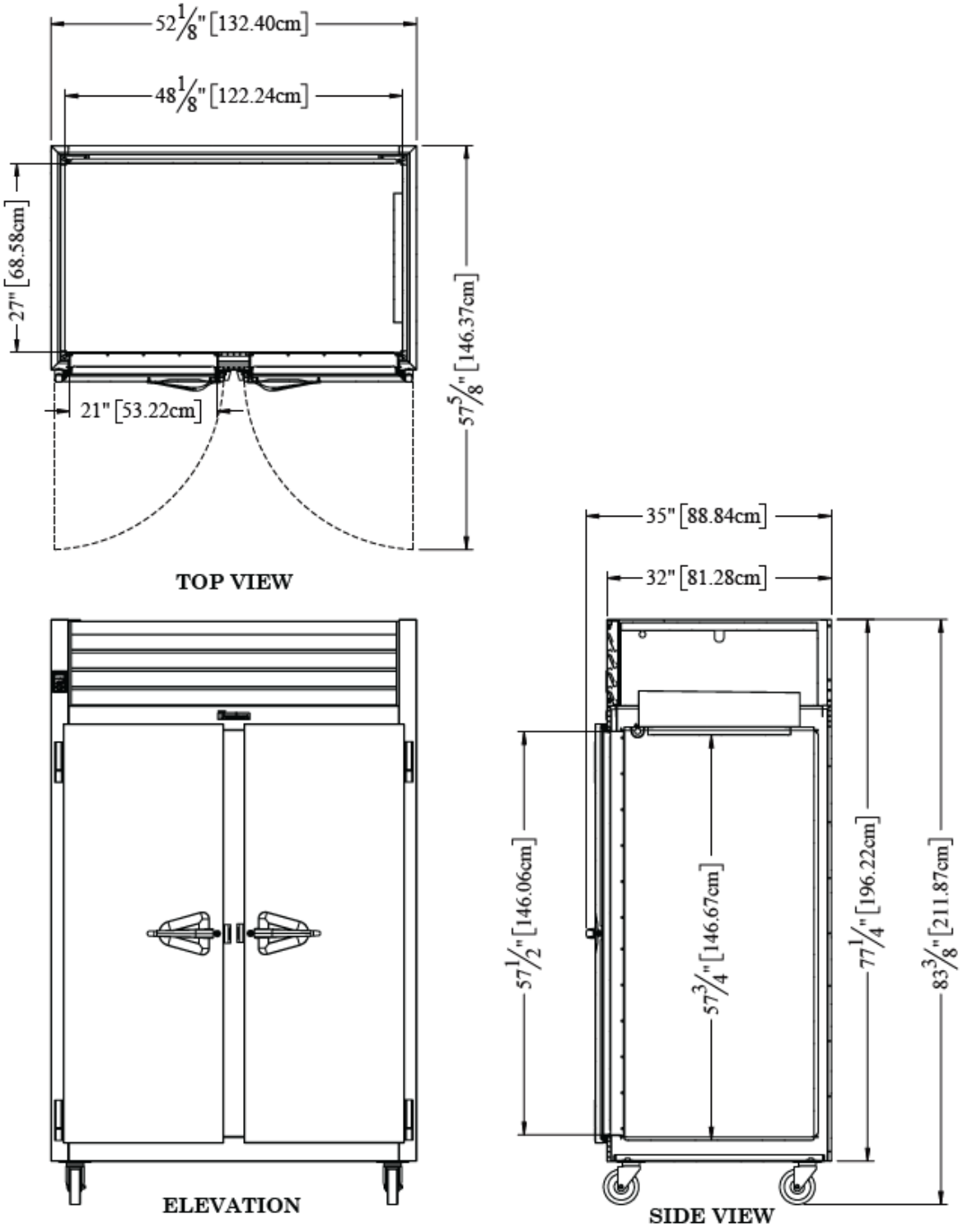
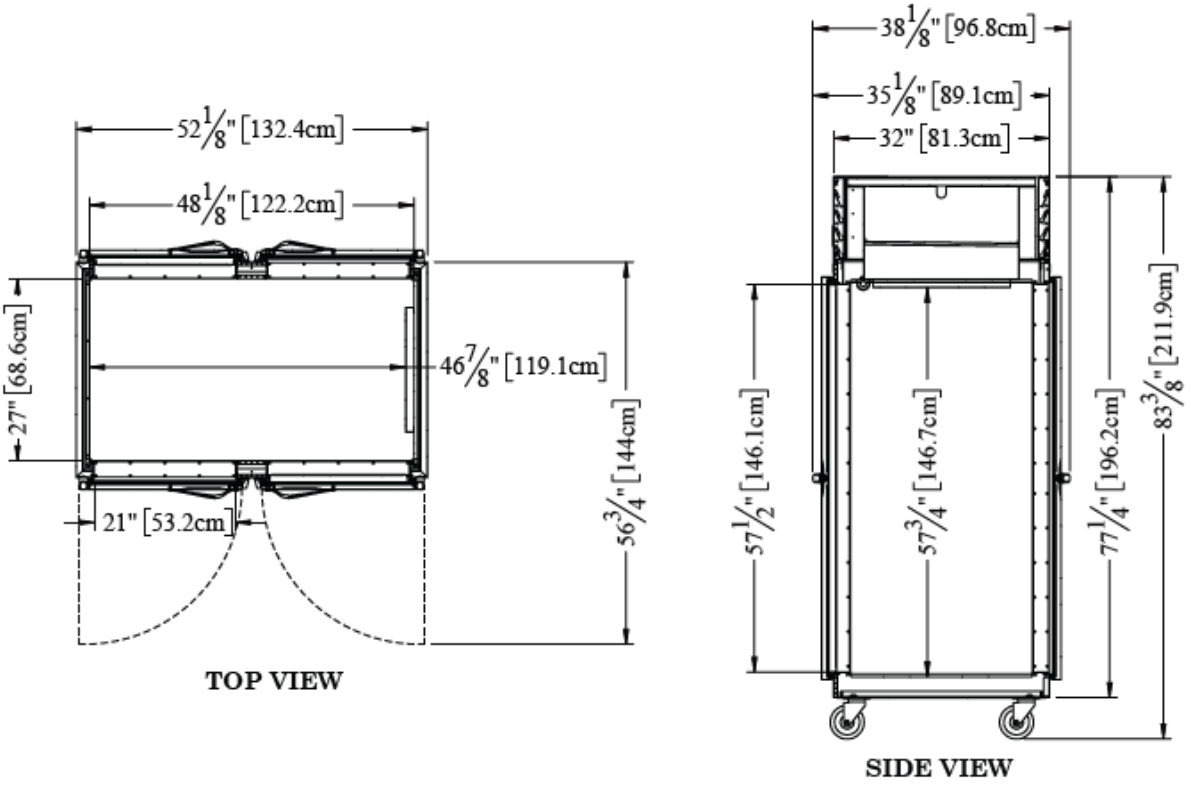


Fig. 1.7g
2 Section Cabinet



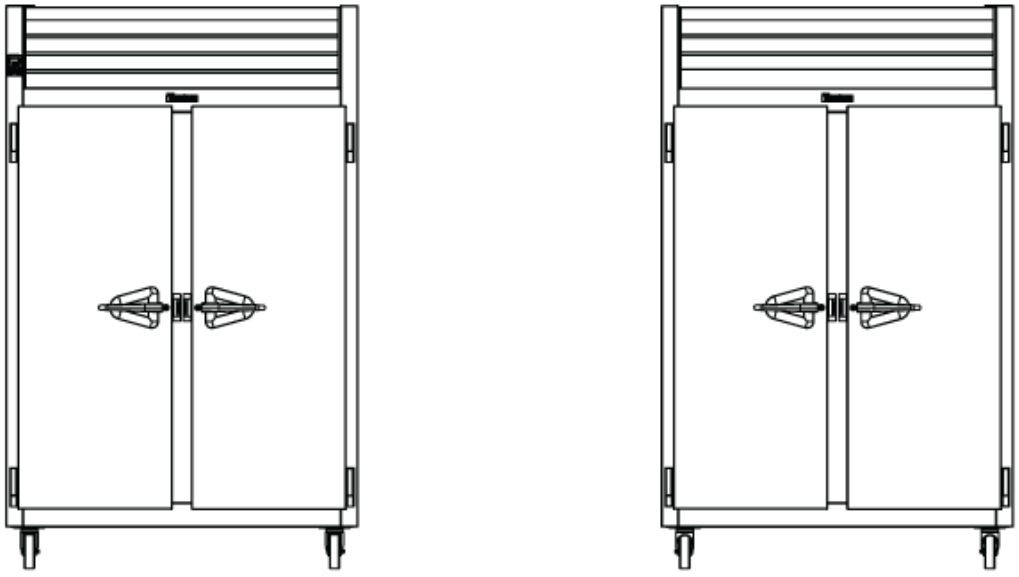


Fig. 1.7h
2 Section Pass Thru Cabinet

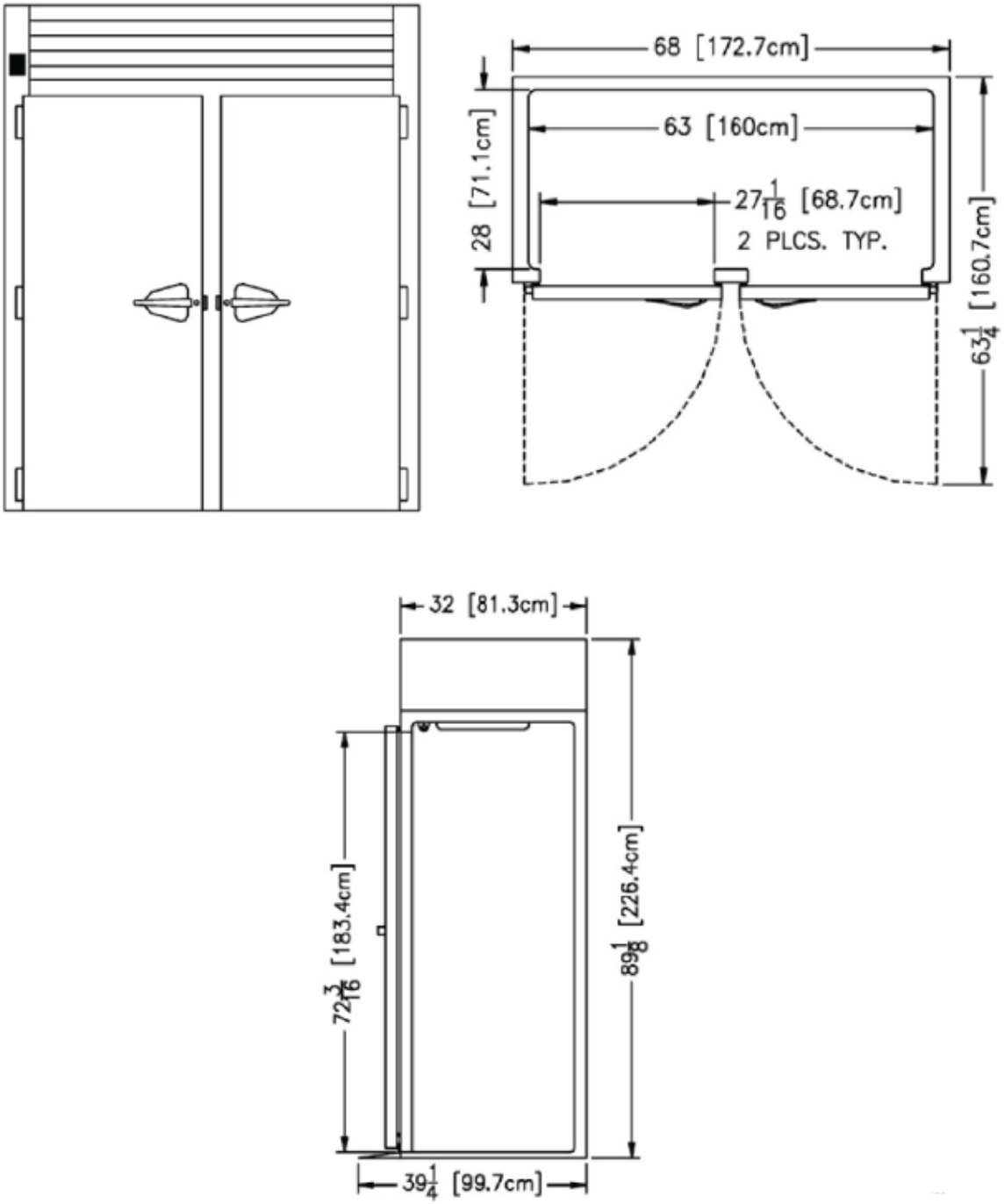


Fig. 1.7j
2 Section Roll in Cabinet

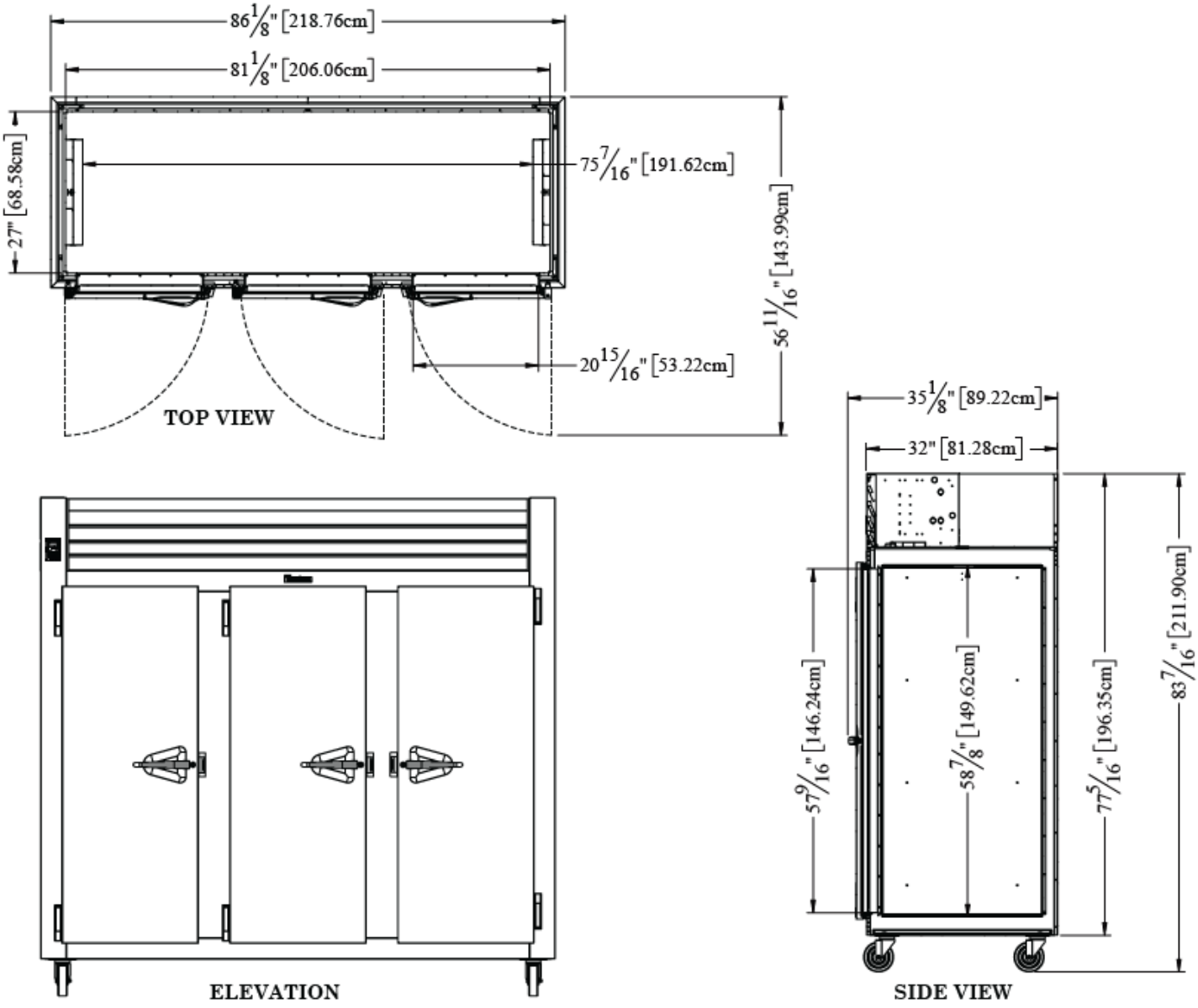


Fig. 1.7k
3 Section Cabinet

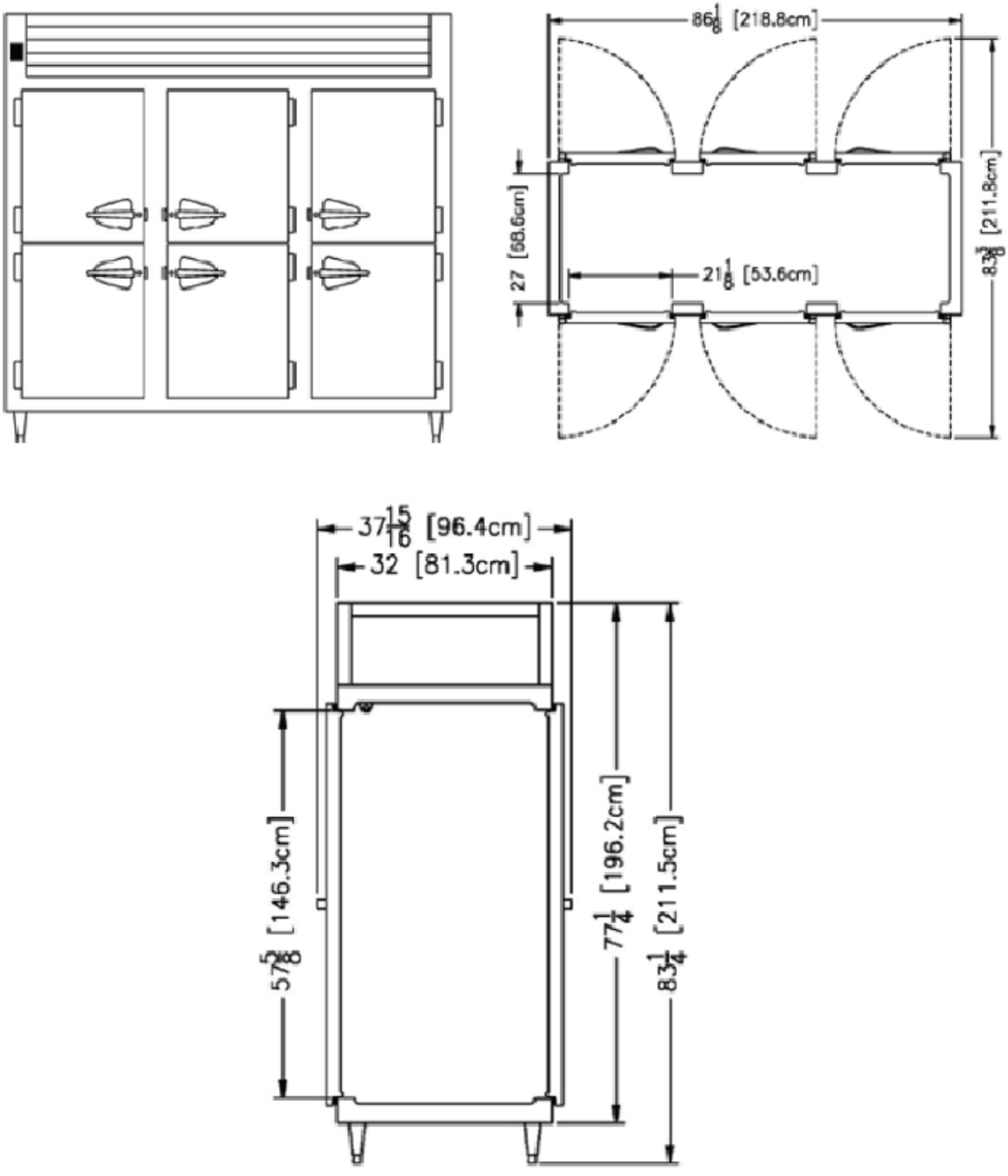


Fig. 1.7l
3 Section Pass Thru Cabinet

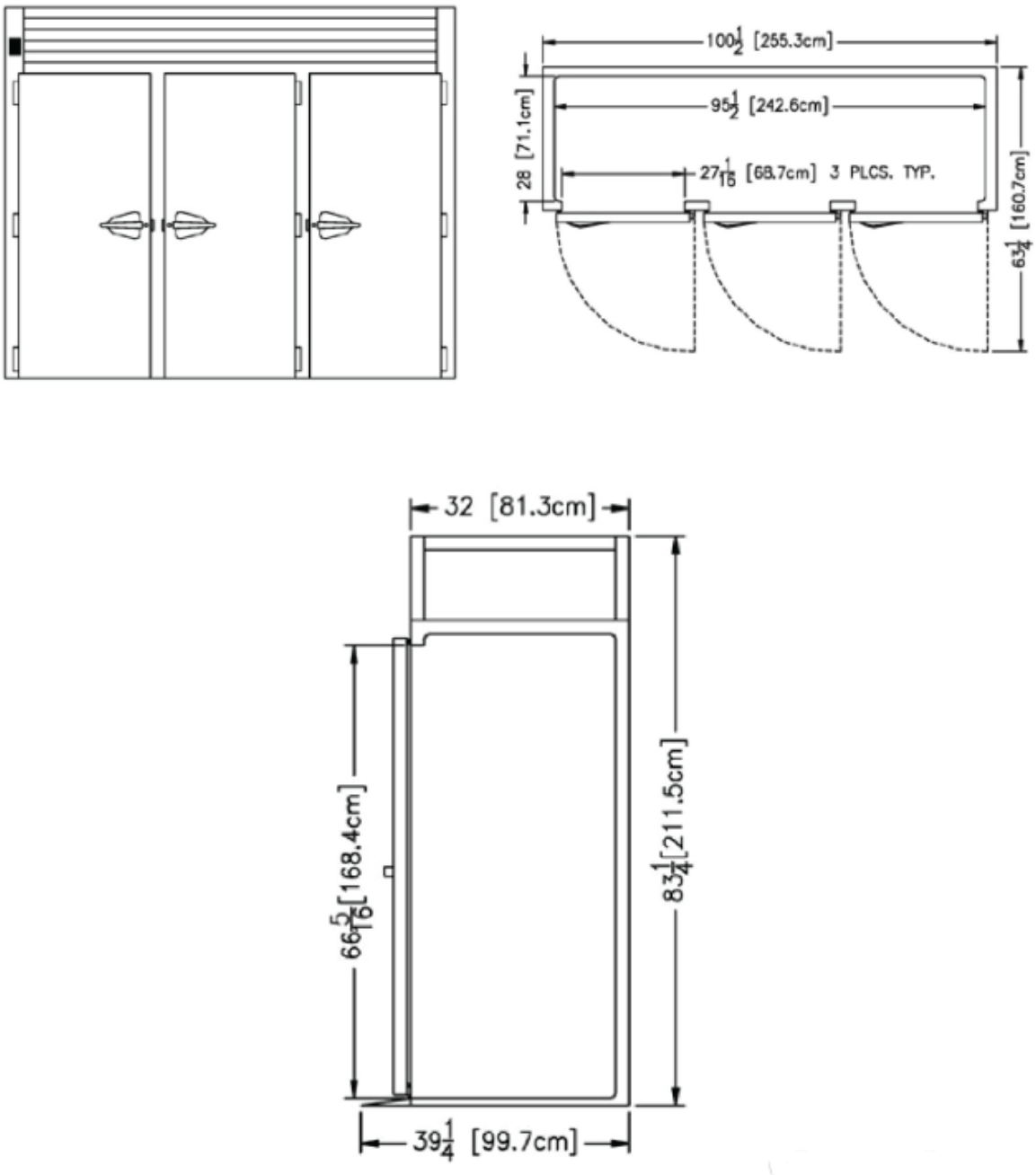


Fig. 1.7m
3 Section Roll in Cabinet

1.8 Cabinet Identification

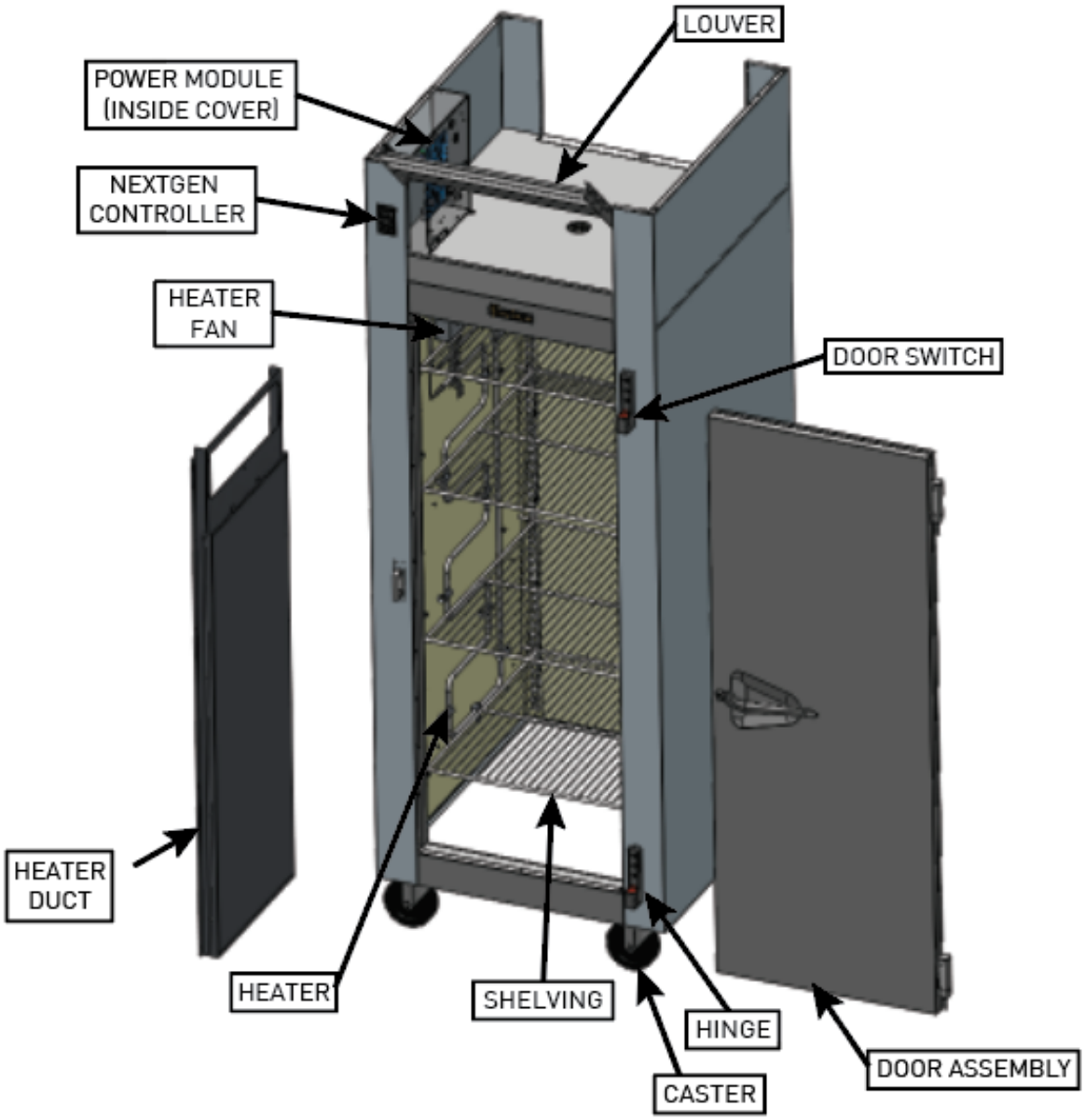


Fig. 1.7.1
SYSTEM VIEW

ISOMETRIC VIEW OF THE CABINET

2. Preventive Maintenance

This section is to inform the recommended preventive maintenance (PM) procedures.
Depending on application, PM schedule may vary.

2.1 Inspect & Clean Unit

Why	Sanitation & prolong cabinet life	
Frequency	Daily	
Time required	3 minutes to prepare	3 minutes to complete
Preparation	Have a soft cloth. Baking soda & water mixed to a 1 TBSP (15mL) baking soda to 1 pint (473.2mL) water ratio.	
Cleaning	Apply with a dampened cloth, wipe in the direction of the metal grain. (Avoid the use of strong detergents and gritty, abrasive cleaners as they may tend to mar and scratch the surface. Do NOT use cleansers containing chlorine; this may promote corrosion of the stainless steel.)	
Inspection	Visually inspect the unit for signs of wear that may require repair.	

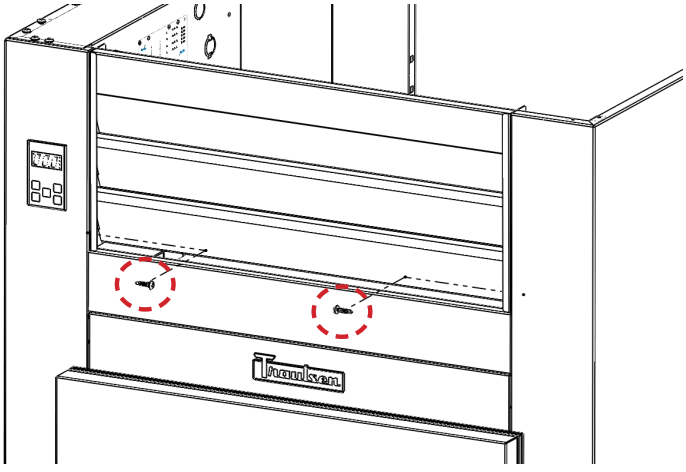
Table 2.1
Cleaning PM Procedure

2.2 Inspect & Clean Door Gasket

Why	Long reliable service life
Frequency	Every 3 months
Time required	10 minutes to complete
Inspection	Open cabinet door(s) to inspect gasket. Pull gasket with hand & visually inspect gasket for tears, dirt, mold or wear. Clean with mild soap & water. Do NOT use cleaners containing chlorine or chlorides. Replace as needed. 341-60083-00 - Full-Height Gasket

Table 2.2
Door Gasket Cleaning PM Procedure

2.3 Louver Function



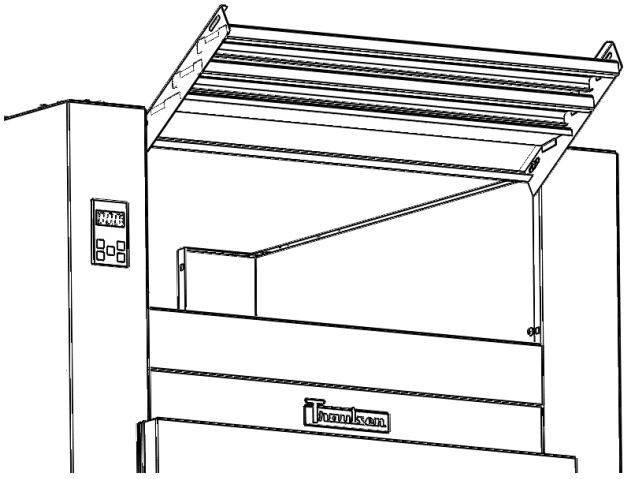


Table 2.3
Louver Function

3. Doors & Hardware

3.1 Removing the Doors & Hardware

To fit through narrow (less than 35") doorways, it may be necessary to remove the door(s), and/or hinges. To remove any solid door, begin by removing the safety screw at the bottom of the top hinge which secures the door in place. Remove this with a #2 Phillips screwdriver and the door can then be lifted off the hinges. After removing the door, it may be necessary to remove the hinge assembly and hardware from the door itself. If it is necessary to remove the hinge hardware from the cabinet, begin by removing the (3 Phillips-head screws which hold it in place. Set these components aside for later reassembly.

The lock keeper may also require removal to reduce the overall cabinet depth to 32".

First remove the lock keeper strike plate by removing the (2 Phillips-head screws which secure it in place- exposing the adjustment screws. Then remove both adjustment screws from the mounting plate. To reinstall the door and/or hinges, please reverse the appropriate sections of the preceding procedure.

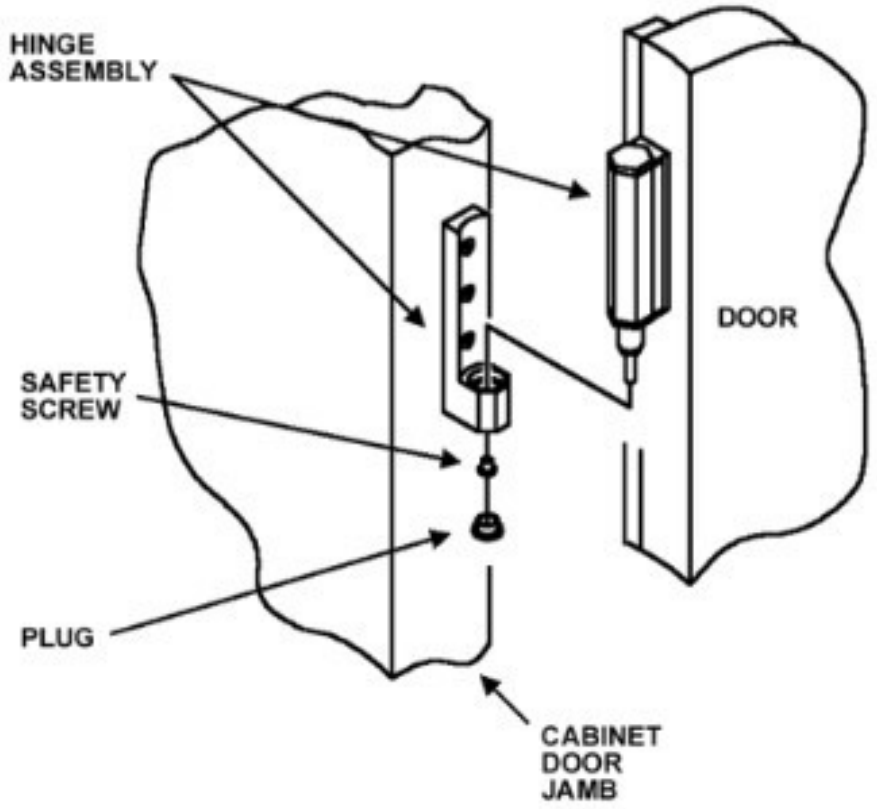


Fig. 3.1a
Hinge Assembly

WARNING

WHEN REMOVING DOORS ENSURE THEY ARE SET ASIDE IN A SECURE POSITION TO PREVENT FALL/ SLIP THAT MAY CAUSE PERSONAL INJURY.

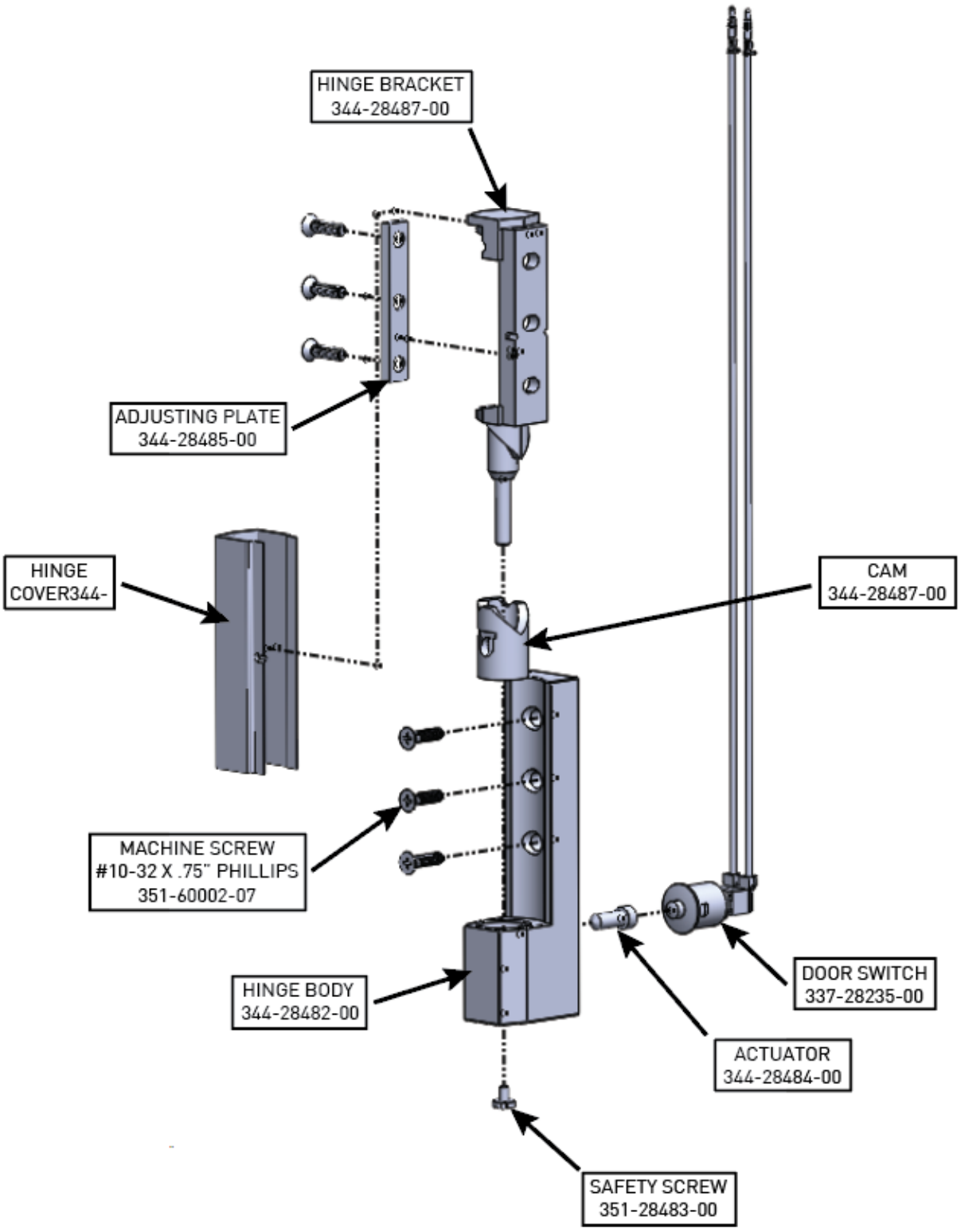


Fig. 3.1b
Hinge Exploded View

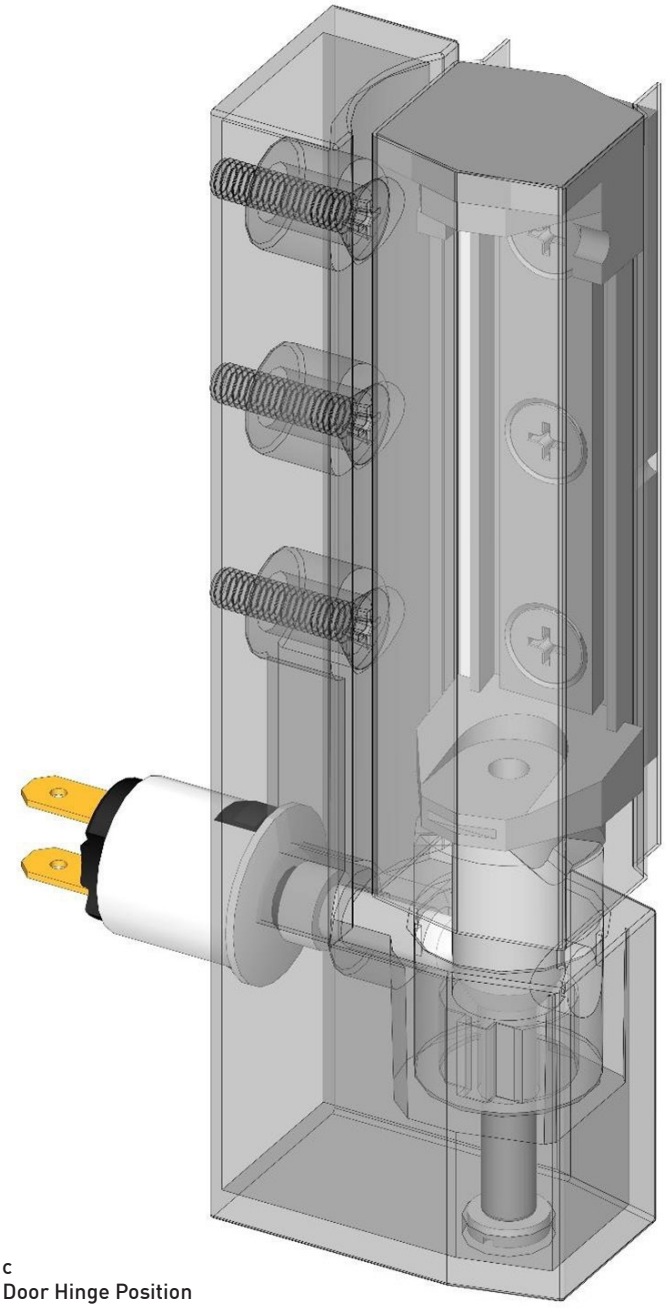


Fig. 3.1c
Closed Door Hinge Position

*** "Scan for Door Switch Troubleshooting & Service Videos!" ***

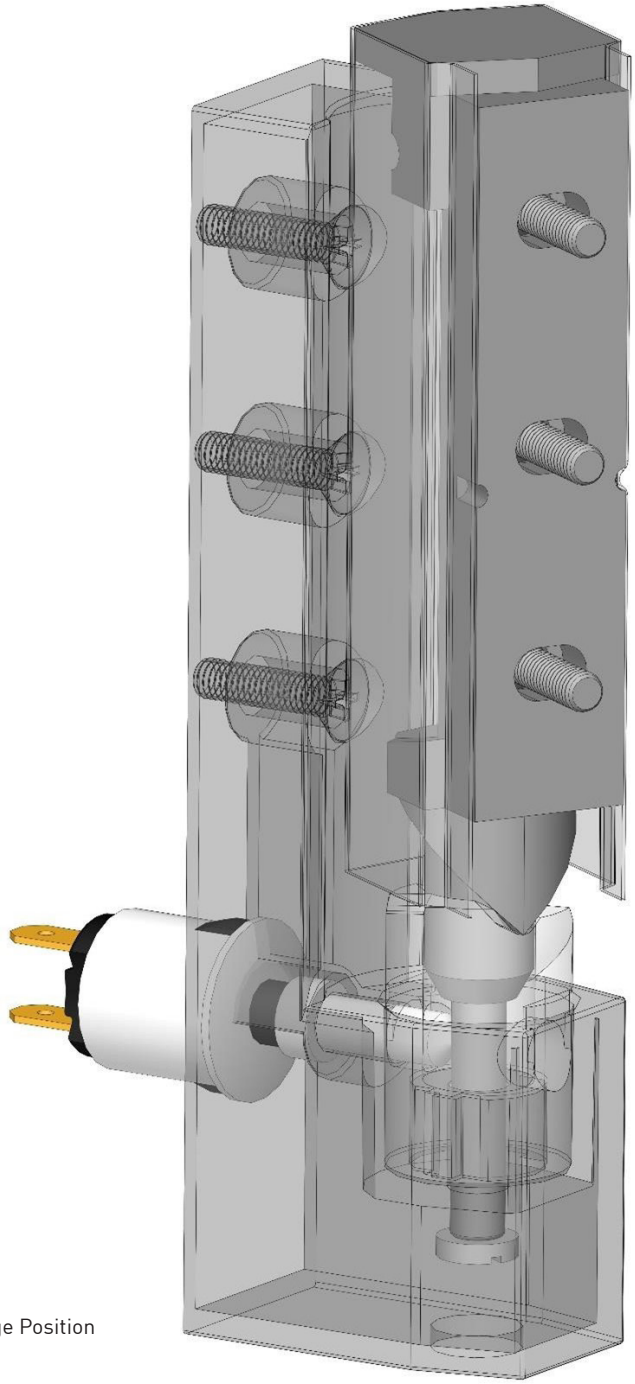


Fig. 3.1d
Open Door Hinge Position

Closing the Door:

The hinge bracket travels along the cam & the thicker portion of the hinge bracket stem pushes the actuator into the door switch, opening the circuit.

- Light turns off
- Fans come back on (if board is calling for fans)

Opening the Door:

The hinge bracket travels along the cam- exposing the thinner hinge bracket stem and the door switch pushes the actuator out, closing the circuit.

- Light turns on
- Fans turn off

3.2 Adjustments

Performing a Door Adjustment

These instructions are intended to aid the technician in the field perform hinge adjustments and may not cover all situations that could arise. Final diagnosis of field-based equipment is the sole responsibility of the technician performing any work required.

1. Remove the hinge safety screw. (bottom of top hinge)
2. Remove the door and gently lay it on the floor to slide the hinge cover off of the hinge bracket.
3. Loosen the 3) bolts securing the hinge bracket to the door.
4. Install the door without hinge covers.
5. Position the adjusting plate to the desired fit, tighten the screws and replace the hinge covers.

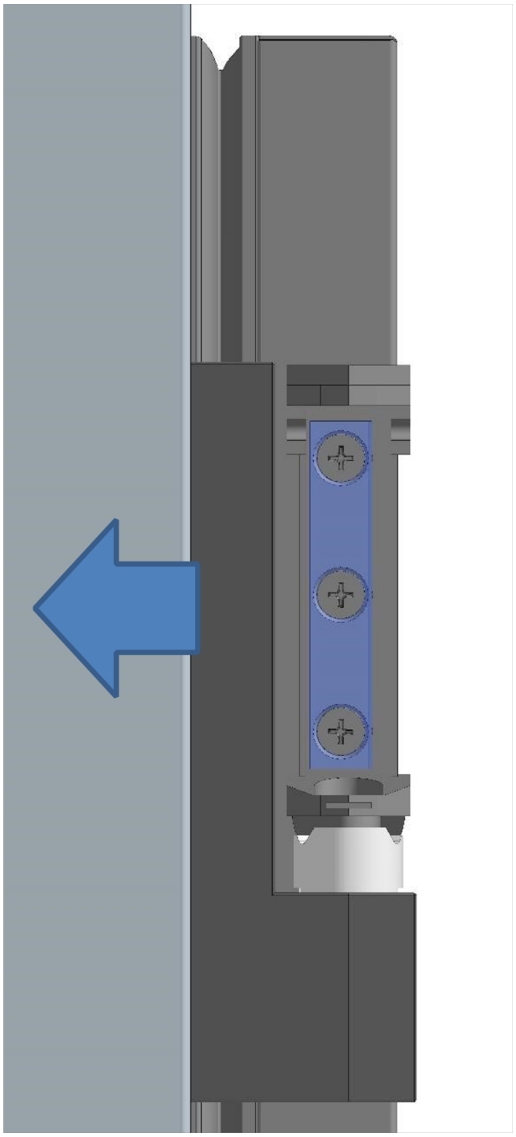


Fig. 3.2a
Door Adjustment Inward

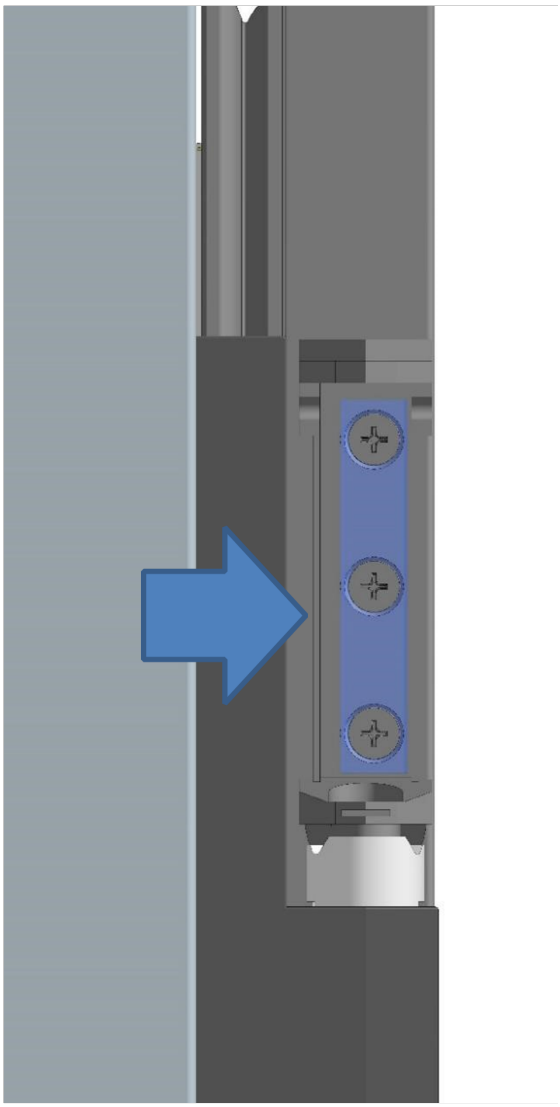


Fig. 3.2b
Door Adjustment Outward

3.3 EZ-Clean Gaskets

Hot Food Door Gasket Replacement- **Full Size Door part#** 341-60256-01 **Half Door part#** 341-60257-01
Remove an old gasket by grasping it firmly by one corner and pull it out. Install the new gasket by inserting all 4 corners first. After the corners are properly inserted, work your way towards the center from both ends- pushing the dart into the retainer until the gasket is completely seated in place. Check for a proper seal all the way around the door.

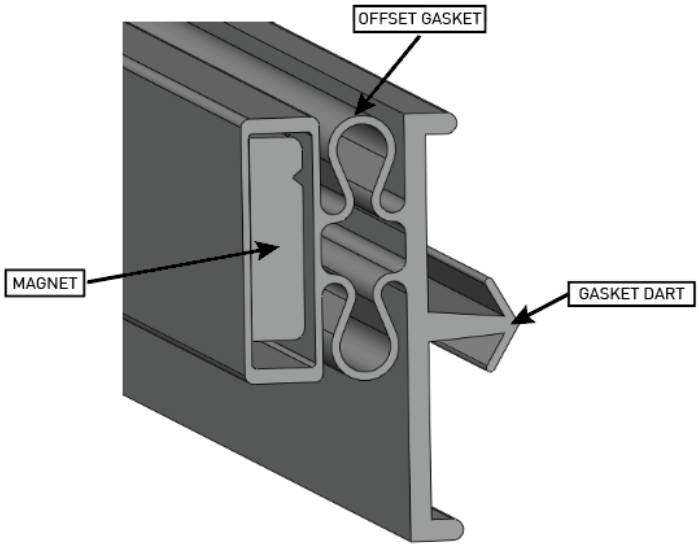
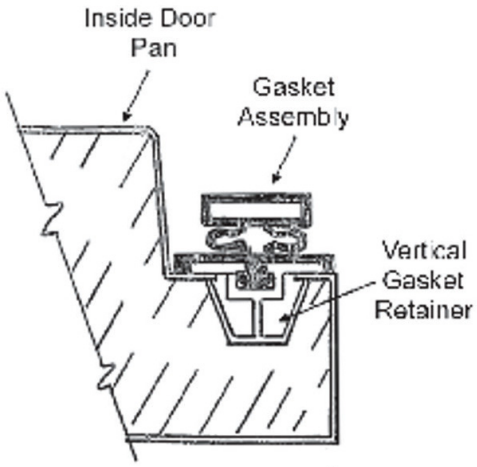


Fig. 3.3
Gasket Section View



Description	Part Number
Full-Height Door Gasket (22.814" x 59.75")	341-60256-01

Table 3.3
Door Gasket Part Numbers

*** "Scan for Gasket Installation & Service Videos!" ***

3.4 Locks

3.4.1 Door Lock Assembly: EXPLODED VIEW

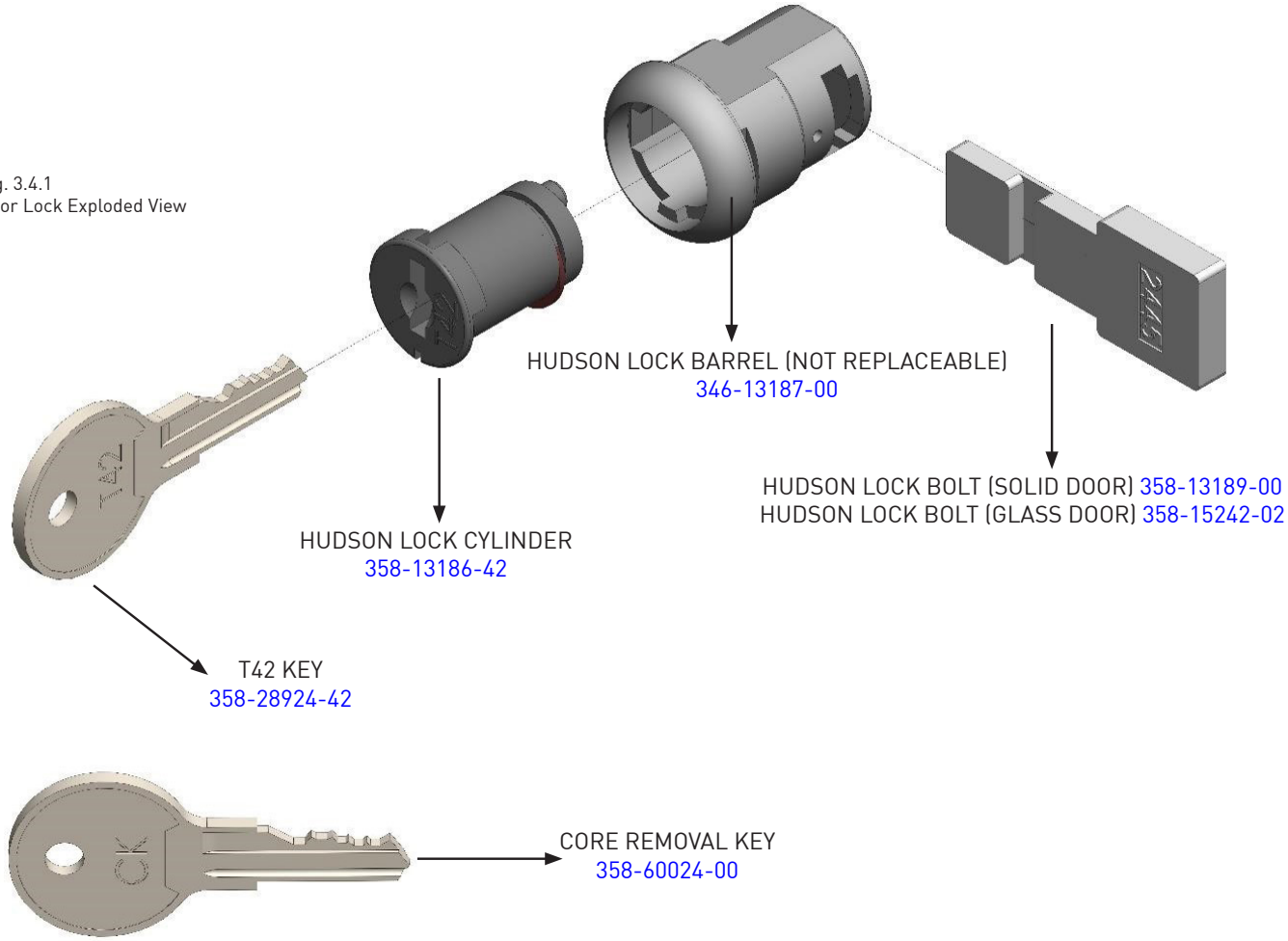


Fig. 3.4.1
Door Lock Exploded View

NOTE: Core removal key should only be used to remove door lock assembly. A damaged Hudson lock barrel requires door replacement.

Service Kit Numbers:

Solid Door Lock Kit	SER-13186-42
Glass Door Lock Kit	358-13186-TAB

Table 3.4
Door Lock Service Kit Part Numbers

3.4.2 Door Lock Replacement Instructions:

Disassembly of Lock

To remove the lock cylinder for replacement, insert the core removal key into the lock- causing the spline to lower so the lock cylinder can be removed. Move the key up & down, then pull backwards; the core key will pull the lock cylinder along with it. The lock bolt is now free to slide out of the lock barrel for replacement (if applicable).

Assembly of Lock

Insert the lock bolt into the lock barrel until the groove in the bolt is approximately in the locked position. Insert the core removal key into the lock cylinder (causing the spline to lower) and insert the lock cylinder into the lock barrel (NOTE: Lock stud must be lined up with lock bolt groove). Use one hand to firmly hold the lock cylinder in place, then remove the core key with the other (causing spline to rise & securing lock cylinder).

NOTE: Lock barrel is assembled to the door during production at the factory. A damaged lock barrel requires door replacement. Core removal key should only be used for lock replacement. Using the core removal key to lock & unlock the door will cause the lock cylinder to fall out.

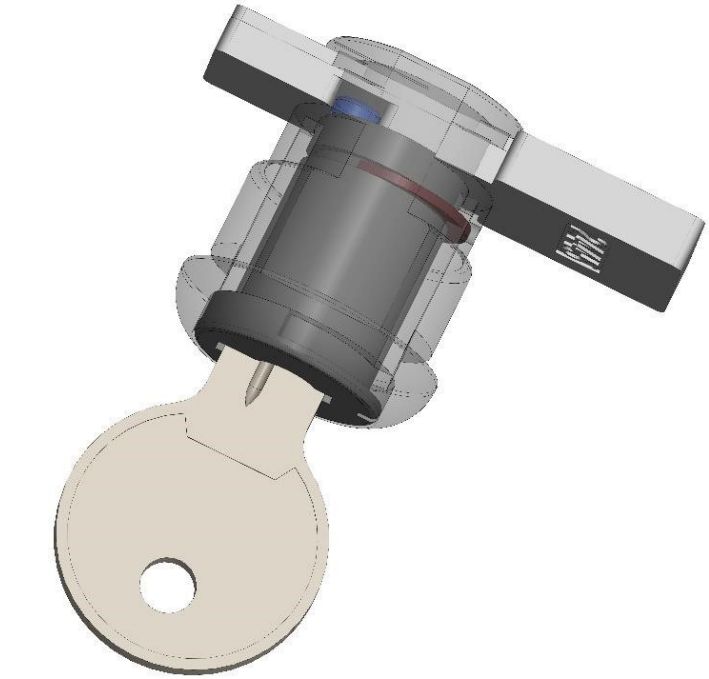


Fig. 3.4.2a
Unlock Position

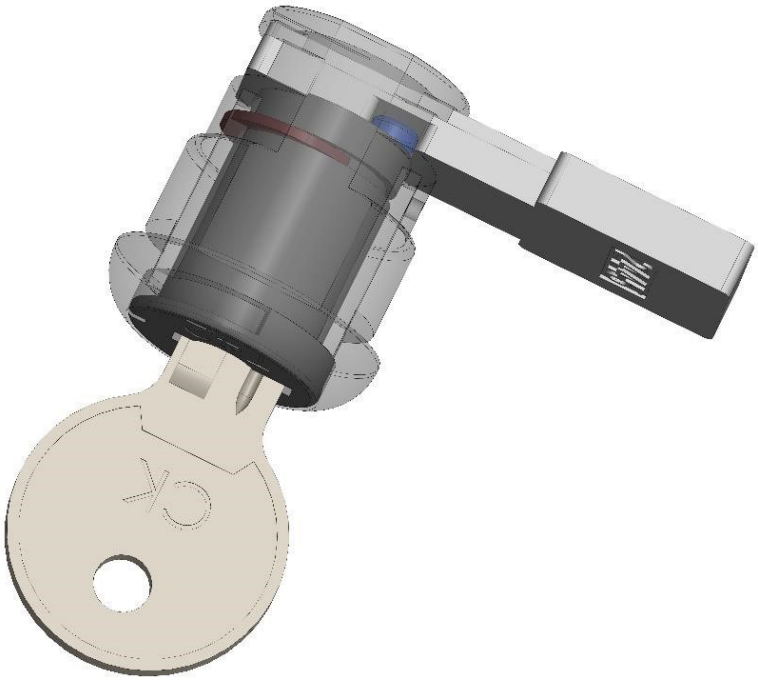
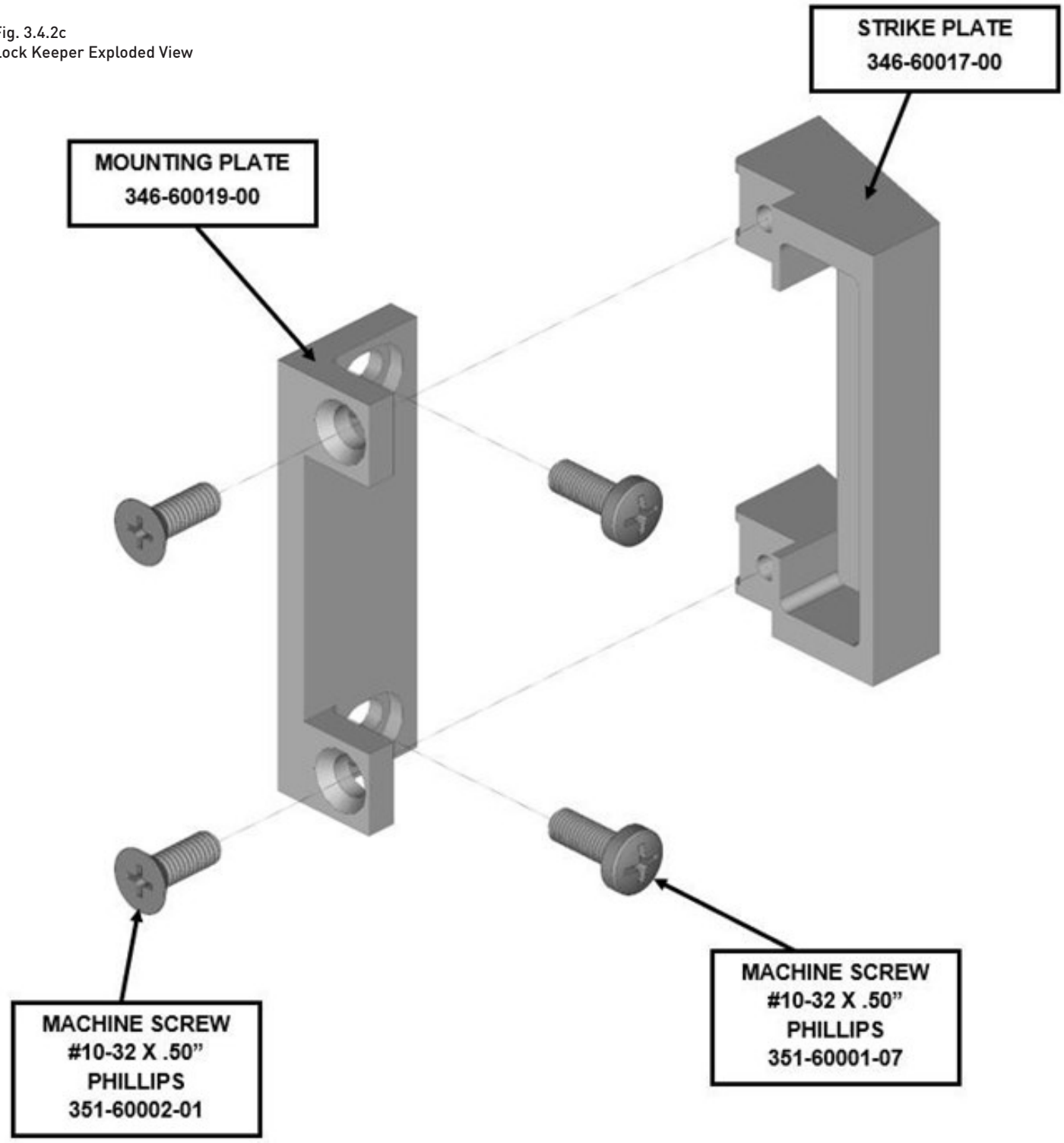


Fig. 3.4.2b
Lock Position

Fig. 3.4.2c
Lock Keeper Exploded View



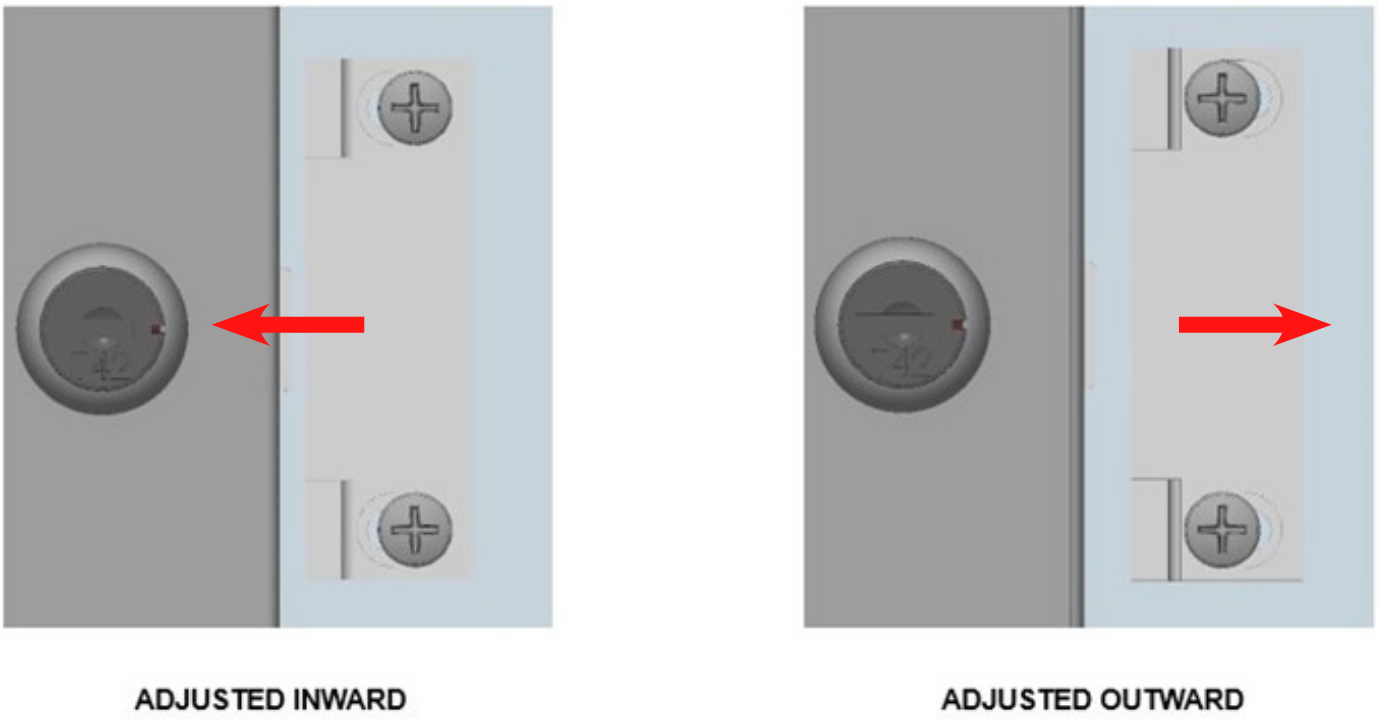
Adjusting the Lock Keeper

Applicable to Traulsen Upright and Undercounter Units with Hinged Doors

Overview

The Lock keeper (sometimes referred to as the door catch plate or strike) is a critical mechanical component that ensures proper door alignment, secure latching, and effective gasket sealing when the door is closed. Over time, normal use, gasket compression, or door sagging may cause the Lock keeper to become misaligned, resulting in poor sealing, increased energy consumption, or door bounce-back.

Fig. 3.4.2d
Lock Keeper Adjustment



Adjustment Procedure

- Loosen the mounting screws securing the Lock keeper to the cabinet frame using a Phillips screwdriver or hex driver, depending on the model.
- Slightly shift the Lock keeper vertically or horizontally until the latch engages smoothly without excessive resistance or slack.
- While holding the Lock keeper in the adjusted position, open and close the door several times to confirm proper engagement. Ensure the door closes flush and the gasket seals evenly on all sides.
- Once satisfied with the alignment, tighten the screws securely.
- Tip: A properly adjusted Lock keeper will produce a firm, consistent resistance at the end of the door swing, ensuring a snug seal without slamming or requiring excessive force.

Servicing and Replacement

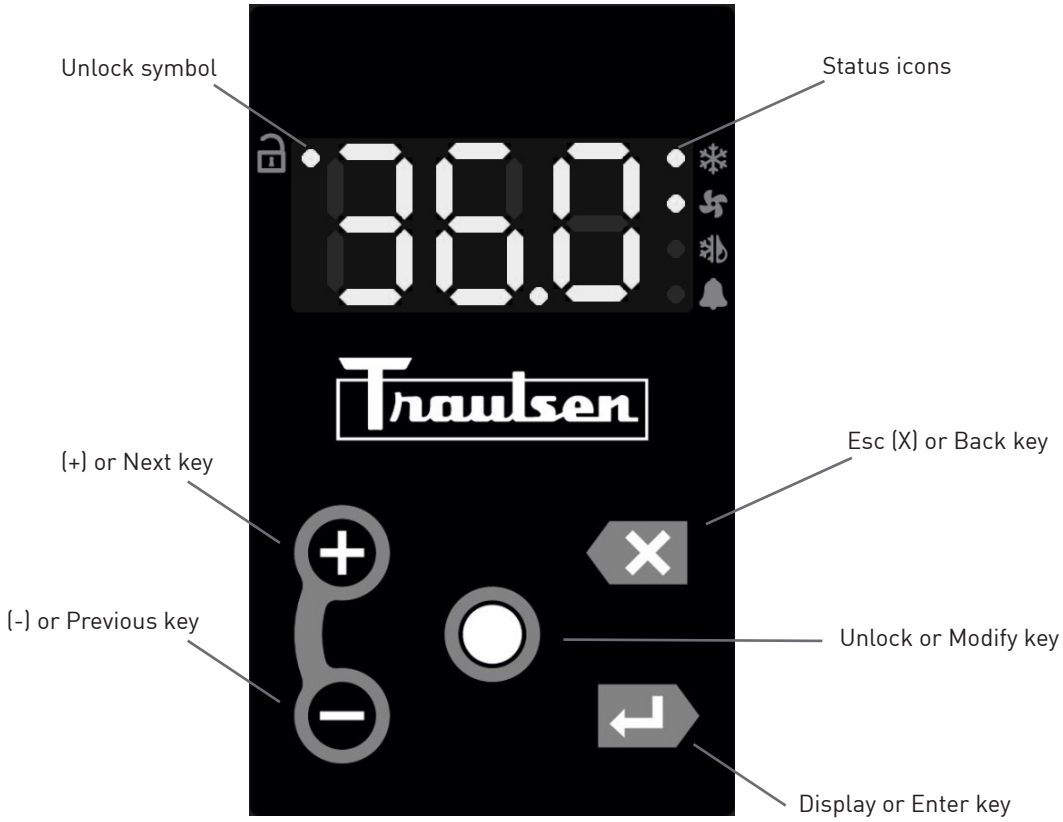
If the Lock keeper is damaged, bent, or no longer secures the door properly even after adjustment, replacement is recommended. To replace, remove the existing Lock keeper and install the OEM-specified part using the original hardware or supplied fasteners. Re-align as outlined above to ensure proper operation with the door latch.

Final Check

Confirm that the door latch engages securely and disengages smoothly.
Visually verify that the door gasket is compressing evenly along the frame when closed.
Ensure that the door remains closed without bounce-back and that no ambient air is leaking into the cabinet.

4a. Controls

4a.1 Understanding the Display



Heating Mode

Evap Fan On

Alarm

Displays Status Icons

4a.2 Unlocking the Display PART# 950-60510-01

The **Unlock Key is a white dot** in the bottom middle of the display, centered between the other four control keys. Press the Unlock Key twice within a second to unlock the keypad (think "**tap-tap**"). The Keypad Unlocked LED will turn on to indicate the keypad is now live. The keypad will stay unlocked until 3 minutes of inactivity have passed- at which time it will automatically lock the keypad.

Unlocking the Display

There are operations the user can perform without having to enter a password: (Change the temperature setpoint)

4a.3 Changing the Setpoint

The setpoint to the unit can be changed simply by pressing the **(+) Plus or (-) Minus Key**.
There will be a slight delay at first to prevent an accidental change, so it will be necessary to hold the key for (3-4) seconds until the value starts to flash. The flashing value indicates the setting is being modified. To raise the setpoint, press the Plus Key to increment to the setpoint you want. Similarly, press the Minus Key to lower the setpoint. When the desired value is reached, press the **Enter/ Key** to lock in the value. Pressing the Back Arrow will abort the process and keep the original set point. The keypad must be unlocked to change the setpoint using the shortcut method.

Hot food units are equipped with digital controls that allow **adjustment of the Setpoint (SP) temperature**. The setpoint determines the target holding temperature inside the cabinet to ensure food safety and quality. Adjustments may be necessary based on menu changes, local health regulations, or operational needs.

Important: Before making adjustments, ensure the unit is powered on and has completed its initial warm-up cycle.

Setpoint (SP) Adjustment Procedure – Hot Food Units

To adjust the setpoint temperature on hot food units, begin by unlocking the display interface. **Tap the center white circle on the display twice** in quick succession to unlock the control panel.
The LED indicator in the upper left corner of the display will illuminate, confirming that the keypad is now active.

- **Press the Enter key to begin. The control will prompt with "000." Using the +/- keys, input the access code "555," pressing Enter between each digit to advance to the next position.**
- **Once the full service code is entered, press Enter to proceed.**
- **The display will show "SEN" press +/-to reach"SET," indicating the system settings menu.**
- **Press Enter again to access this menu.**

-Use the **+/-**keys to scroll until **"SP**" appears on the display, representing the Setpoint parameter. Press **Enter** to select it. (The current setpoint temperature will display, for example, 140°F.)
-To initiate a change, **tap the center circle** on the display. (The temperature value will begin blinking continuously, indicating that it is now in adjustment mode.)
-Adjust the setpoint temperature using the **+/-** keys until the desired value is shown. Once the preferred temperature is set, press Enter to confirm. (The display will stop blinking, indicating the new temperature has been saved.)

Hot food holding temperatures typically fall within the range of 140°F to 185°F, based on the product being held and operational requirements.

Always ensure setpoint changes comply with local food safety regulations and company standards.

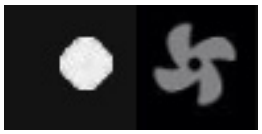
Additional Notes

Default Settings: Hot food units are typically factory-set at a standard holding temperature (example: 160°F). Adjust only if necessary.
Monitoring: After changing the setpoint, monitor the internal cabinet temperature to ensure the unit is maintaining the new target correctly.
Safety Reminder: Never set the holding temperature lower than the minimum safe hot food holding temperature of 135°F, as recommended by food safety guidelines.

Service Tip

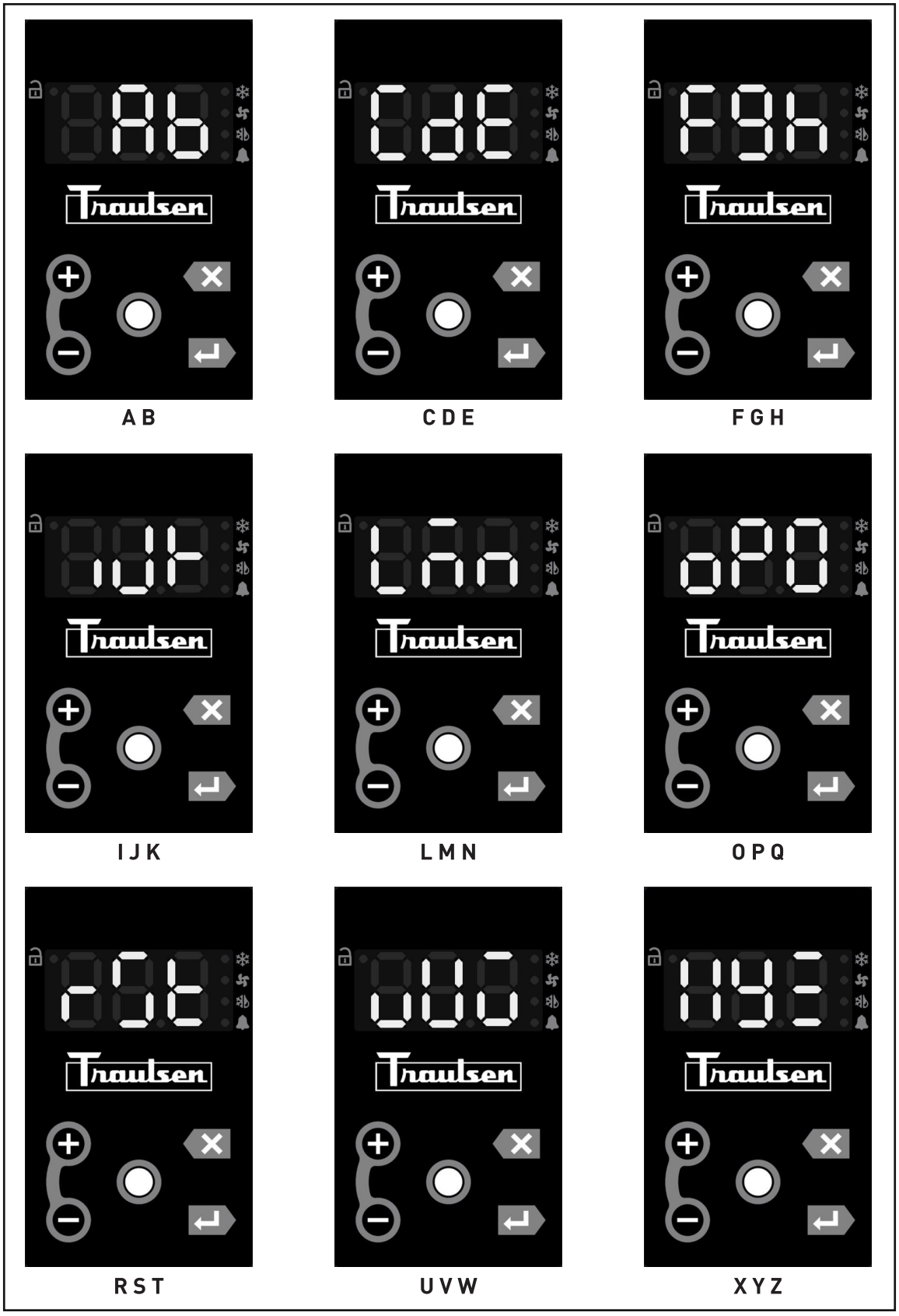
If the setpoint cannot be adjusted or the control does not respond: Verify that the control is unlocked (if applicable).
Check for any error codes displayed. Inspect for any signs of control board or sensor failure.
If the issue persists, contact technical support for further troubleshooting.

Heating Mode



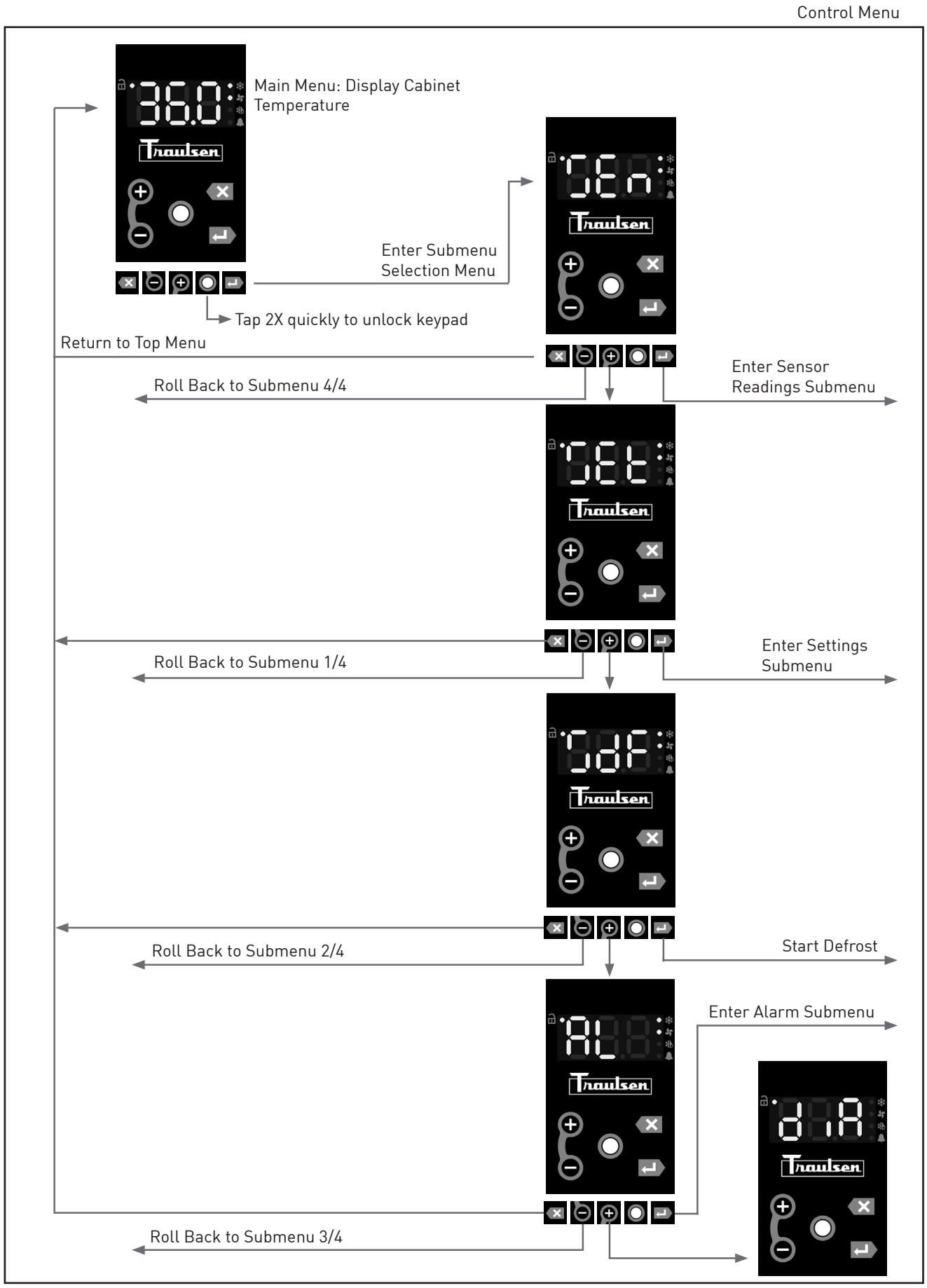
Evaporator Fan

4a.4 Decode Alphabet

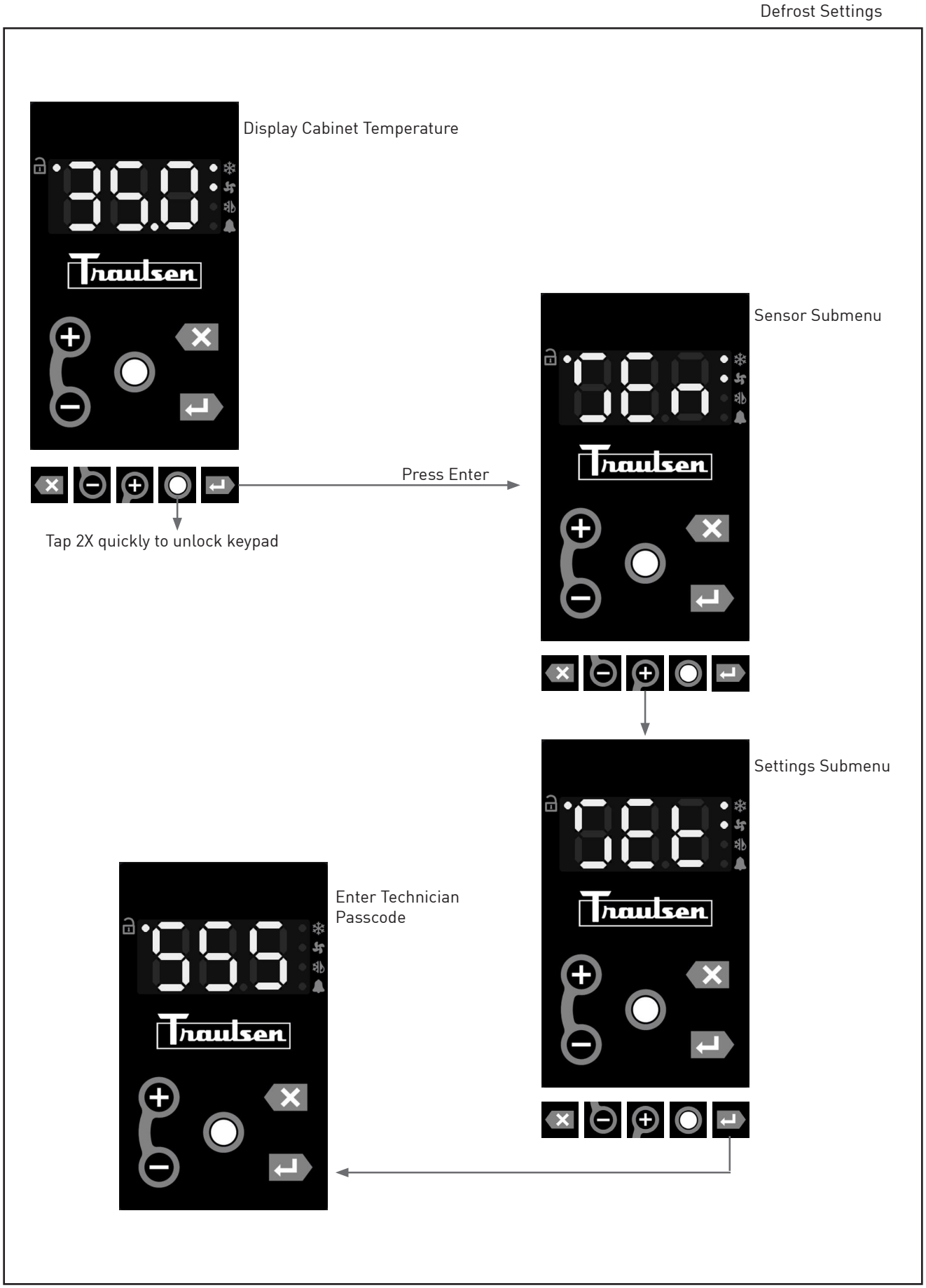


Decoding the display
ALPHABET

4a.5 Understanding the Menu System



4a.6 Settings Access Menu



Hot Food Unit – Diagnostic & Troubleshooting Guide

This guide is intended for trained service technicians to properly diagnose and verify heating function, airflow, and sensor accuracy in Traulsen hot food cabinets. The procedures below isolate key systems: cabinet sensor, heating element, fan operation, and door switch behavior.

Cabinet Temperature Validation & Sensor Accuracy

Confirm that the cabinet sensor is accurately reporting temperature to the controller.
Procedure:

- Observe the temperature displayed on the control.
- Using a calibrated temperature probe or thermocouple (attached to a digital multimeter), measure the actual air temperature within the center of the cabinet.

Compare both readings:
If readings are within ±2°F, the sensor is likely accurate.
If the display reads significantly higher or lower than the actual temperature:
Test the sensor in a stirred ice water bath.
The sensor should read approximately 32°F (0°C) or 32.7k ohms under stable conditions.
Notes:
Sensor location should not be obstructed or positioned near door openings or heating elements.
A misreading sensor may cause short-cycling, overheat, or failure to reach setpoint.

Heating Element Verification

Confirm the heating element is receiving power and electrically sound.
With the unit powered ON, access the control board.
Use a multimeter to test for 120V AC across the heating output terminals while the unit is actively calling for heat (below setpoint).
If 120V is present at the control board but the heater is not warming:

- Power down the unit and allow heater to cool.
- Disconnect heater terminals.
- Measure resistance across heater leads using the Ohm (Ω) setting.
- A typical element should read 20–40Ω depending on wattage and length.
- OL or infinite resistance = open circuit Replace heater.

Additional Check:
Inspect the thermal cutoff/high-limit switch wired in series. This switch may open above 150°F ±5°F as a safety cutoff.
If switch is open below 110°F, replace the combined heater/safety assembly.

Fan Operation & Voltage Test

Ensure proper fan function and airflow during heating cycles.
With doors closed and the unit calling for heat:
Use a multimeter to check voltage at the fan motor terminals. Fans should receive 120V AC during operation.
If voltage is present but the fan does not spin:
Manually rotate fan blade to check for bearing seizure or debris.
If seized or noisy, replace the fan motor.
If no voltage is present:
Confirm fan outputs from the control board are energized.
Check for broken wires, loose connectors, or board output failure.

Important:
Continuous fan operation is critical to maintain uniform cabinet temperature and prevent overheating localized to the heater zone.

Door Switch (337-28235-00) Functionality Check

- Verify door switch signals are functioning and interpreted correctly by the controller.
- Open the cabinet door and observe the following:
- Interior light should activate.
- Evaporator fan should stop (if unit is programmed for door fan interruption FNA Setting).
- Close the door:
- Light should deactivate.
- Fans should resume

Troubleshooting Tips:

If light stays on with door closed, check switch alignment and continuity.
If the fan remains off with door closed, test voltage between door switch circuit and control input. Misread door state can disable fan outputs.

Conclusion & Field Notes

If the unit is not reaching setpoint or failing to maintain temperature:

- Verify sensor accuracy
- Confirm heater function (voltage and continuity)
- Verify thermal fuse (Ohm)
- Check fan performance (mechanical and electrical)
- Validate door switch signaling

Always allow full cycling after repairs before verifying temperature hold time. Document findings, part replacements, and update service records accordingly.

Consistent Heat Depends on Accurate Sensor Readings

- **The cabinet sensor is critical for maintaining target temperature.- Misread sensors can cause under-heating or overheating, impacting food safety.**

- **Voltage Verification Is Your First Diagnostic Step: Always confirm that the heating element is receiving 120V before replacing parts. If voltage is present but there's no heat, test heater resistance to verify continuity.**

- **Defrost Is Not Required, but Air Circulation Is Crucial: Unlike refrigeration, hot food units do not defrost—but they rely on steady airflow to distribute heat evenly.**

- **Fans must operate properly; otherwise, hot spots and temperature recovery issues will occur.**

- **Door Switches Affect Fan Operation If the door switch fails, fans may stay off—causing false temperature readings and slower recovery. Always verify door switch functionality during troubleshooting.**

Proper Power Configuration Is Critical (120V vs. 220V)

Units must be wired correctly, especially 220V models which require internal jumpers to step down to 120V for fans and heating controls.
Mis-wiring can damage fan motors and control boards.

Routine Checks Prevent Service Calls

Ensure pans are inserted properly, doors close fully, and sensors remain in place.
Small missteps in daily use often lead to preventable failures.

Heating Elements Can Fail Silently

A failed element may show no visible signs—use ohm testing to confirm its condition.
High-limit thermal cutoffs must be tested with the element as a combined circuit.

4a.7 Control Cover Removal & Components

4a.7.1 Removing the Display

Remove bottom louver screws & rotate louver up out of the way. Disconnect cable from the back of the controller. Lastly, squeeze the 4) tabs holding on the back side of the display & push outward to remove the display. See figure 4.12.1.

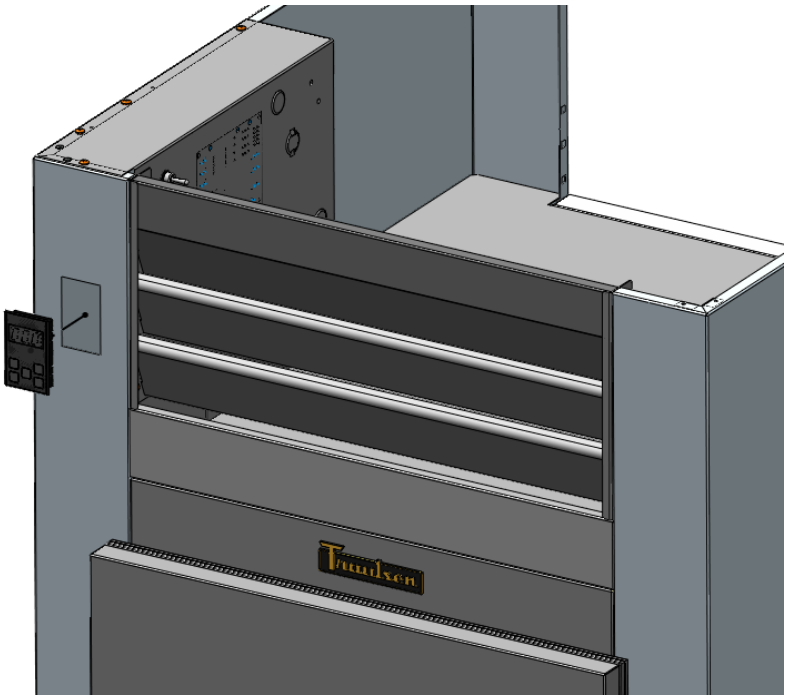


Fig. 4a.7.1 Display Removal
PART # 950-60510-01

4a.7.2 Installing the Display

Line up the display with the cutout on the cabinet. Firmly press the 4) outside corners (do not press the center) of the controller into the cabinet until the 4) tabs click into place. Make sure to reconnect the cable to the display.
NOTE: Do not press on the center of the display during installation to avoid causing damage.

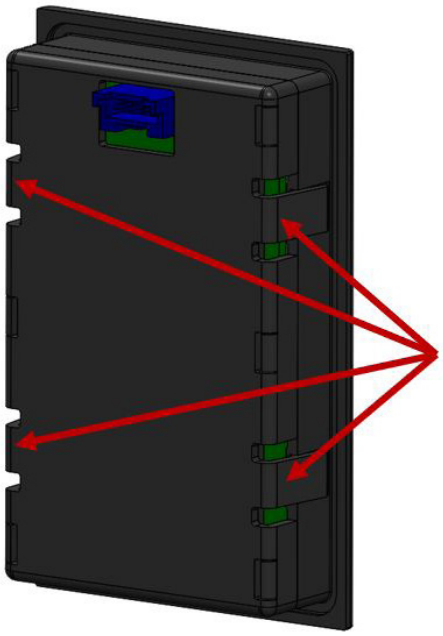


Fig. 4a.7.2 Display Install

4a.7.3 Accessing the Power Module (Control Board)

Use a #2 Phillips screwdriver to remove (3 screws (see figure 4.6.3) and lift on bracket.

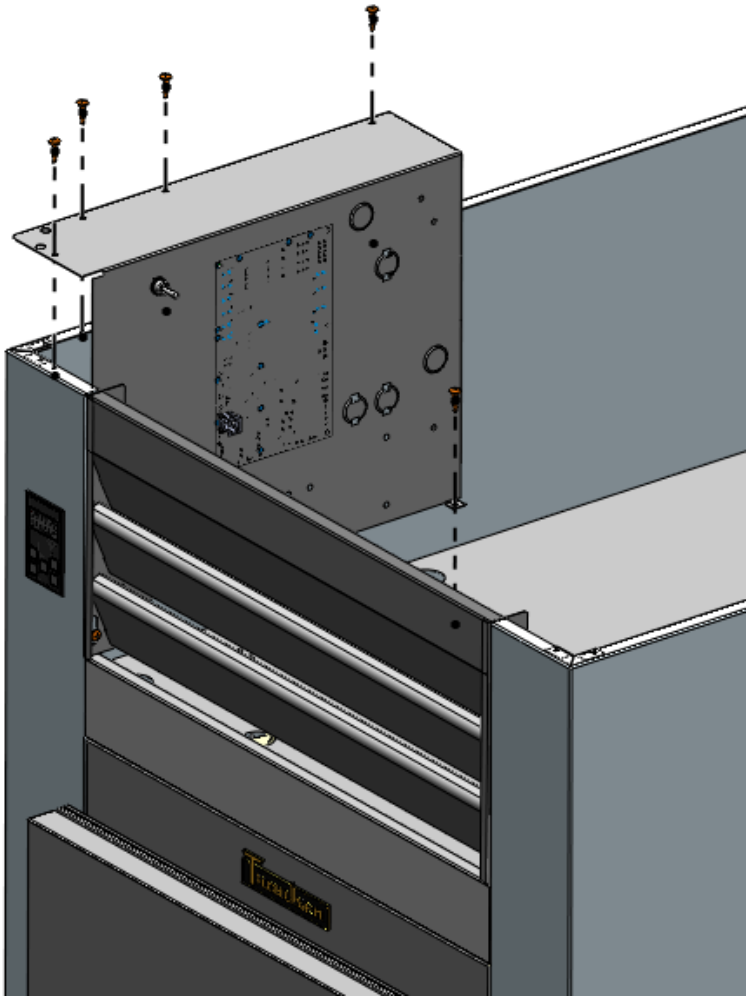


Fig. 4a.7.3 Power Module Access (Control Board)

Accessing the NexGen Power Control Module

The NexGen Power Module (control board) is strategically located at the top of the unit to provide clear, unobstructed access for service technicians. This placement is intentional, ensuring that both routine maintenance and advanced troubleshooting procedures can be performed with minimal disassembly.

- Using a #2 Phillips screwdriver.
- To access the control module, begin by removing the screws securing the top cover panel
- Once the panel is removed, the control board mounting bracket can be lifted, fully exposing the board and its associated components, including the wiring harnesses and display interface connections.

This top-mounted design centralizes all critical electrical components—including the user interface, control relays, input/output terminals, and wiring—into a single service zone. This not only simplifies the diagnostic process but also reduces the chance of accidental damage to other internal components during service procedures.

By placing the control module in a dedicated and easily accessible location, Traulsen minimizes technician workload, reduces unit downtime, and supports safer service practices. The layout also enhances visual inspection, allowing for quick identification of disconnected wires, board damage, or abnormal indicators such as LED faults. This thoughtful engineering promotes faster repairs, greater reliability, and long-term serviceability in high-demand environments.

4a.8 Power Module Connections Overview

Part Number: **950-60509-02 Blue factory installed** pictured below,**950-60509-01 Green Replacement board** (NOTE: Serial & Model #'s necessary for power module replacement due to programming)
Picture below illustrates input/output connection points

4a.9 Power Module LED's & Reset Button Overview

NOTE: To reboot the board press the reset button (see figure 4.14) for 1 second or until all LED lights flash, shut off, and then come back on again.
The reset button does not restore programming back to factory settings.

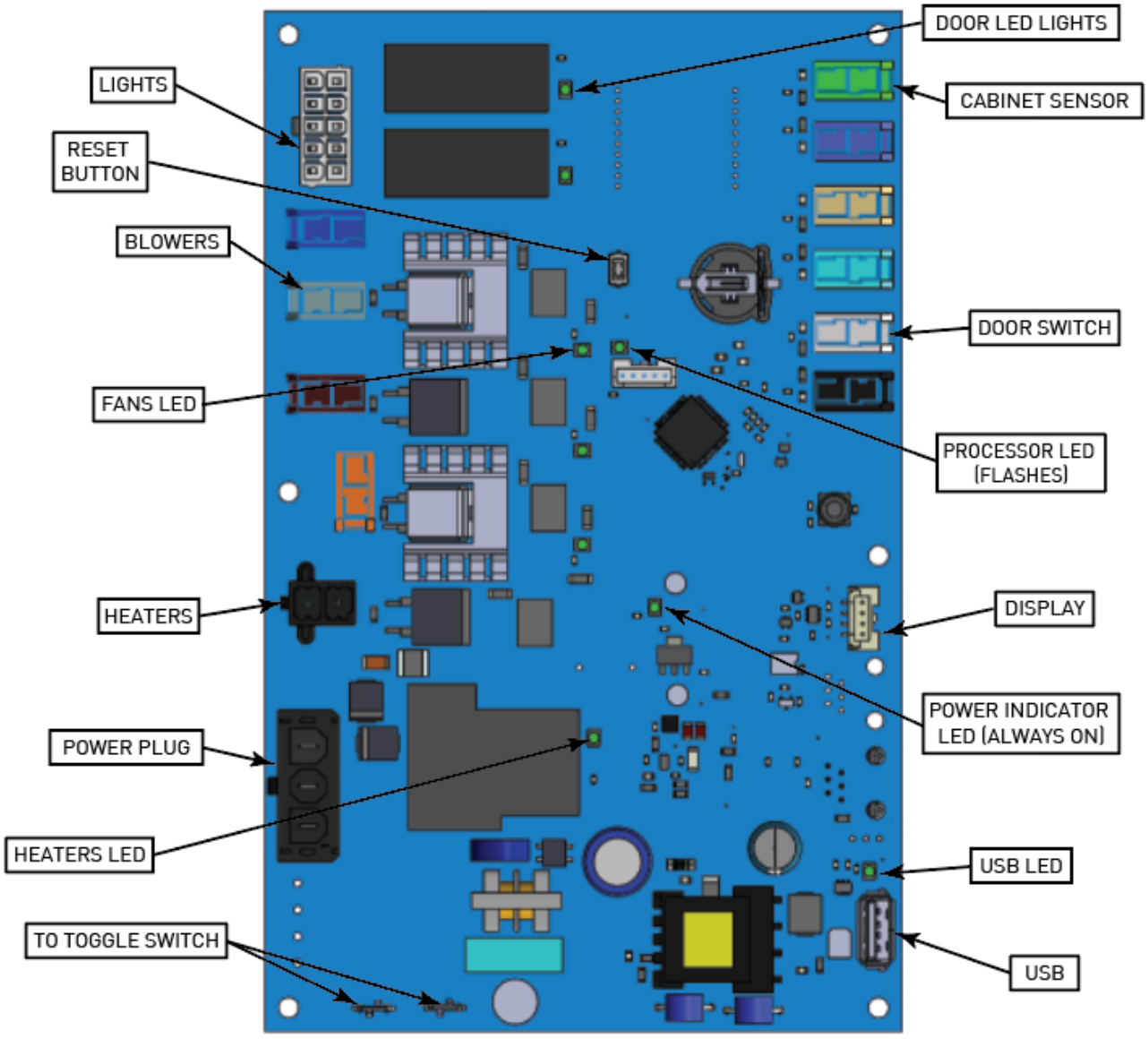


Fig. 4a.8 Power Module Access (Control Board)

Reset	To reboot the board press the reset button for 5 seconds or until all the LED lights flash, shut off and then come back on again.
Toggle Switch	Toggle switch disconnects power to all controls and components. When you turn on toggle switch there is a 5 second time delay before start up.
Door Switch	12VDC to Door Switch. When you open door there is a 1 second delay before the light comes on.
Data Logging	8 GB SanDisk USB drive logs data every 10 secs for up to 10 years
High Voltage Outputs	All high voltage component outputs can be isolated from the rest of the circuit by disconnecting their respective 2 pin connector form the board. All components may be tested with direct power ONLY when disconnected from the board. DO NOT jumper power at the board.

4a.9.1 Key Service Functions & Field Discussion

When performing diagnostics or service work on Traulsen units, technicians should be familiar with several critical features that impact power control, safety, diagnostics, and data recovery. Below are essential points of discussion for any technician or service team working with these boards.

Reset Function

The control board can be reset by pressing the designated Reset Button (refer to Figure 2 in the service schematic). Press and hold this button for approximately five seconds or until all LED indicators illuminate briefly, shut off, and then power back on. This confirms a full reboot of the board. This reset may help resolve minor communication or software-related anomalies without disconnecting power to the entire unit.

Service Tip: Always document any errors prior to resetting, as some fault history may be cleared during reboot.

Toggle Switch (Power Interrupt)

The unit features a Toggle Switch that functions as a master control to disconnect power to the control board and all connected components. This is useful during servicing, as it provides a safe way to fully power down the system without unplugging the entire unit. Upon restoring the toggle switch to the ON position, there is a 5-second startup delay, allowing the board to initialize before relays and components engage.

Reminder: Avoid powering components during this delay to prevent unnecessary load surges.

Door Switch Operation

The door switch circuit operates on 12VDC. When the door is opened, the circuit introduces a 1-second delay before energizing the interior light. This is designed to eliminate flicker from momentary door openings and extend lamp life. If lights are not functioning, always verify 12VDC at the switch terminals and check the integrity of the delay circuit through the board.

Troubleshooting Tip: A failed door switch can prevent the light from activating and may affect defrost or fan operation in certain models.

Data Logging via USB

The NexGen control board comes pre-configured with an 8GB SanDisk USB drive, capable of logging system data every 10 seconds. This long-term data logging can provide a timeline of temperature trends, door openings, alarms, and system performance. With up to 10 years of storage, this feature is invaluable for warranty reviews, performance audits, and troubleshooting intermittent issues.

Field Application: If a customer reports sporadic issues, pull the USB data log and analyze trends to support a diagnosis or validate performance history.

High Voltage Outputs & Safety Testing

Each high voltage output (e.g., for fans, heaters, defrost components) is connected to the board via a dedicated 2-pin connector. These connectors allow isolation of individual components during diagnostics. Technicians may apply direct power (from a test cord or bench supply) to these components only when they are fully disconnected from the board.

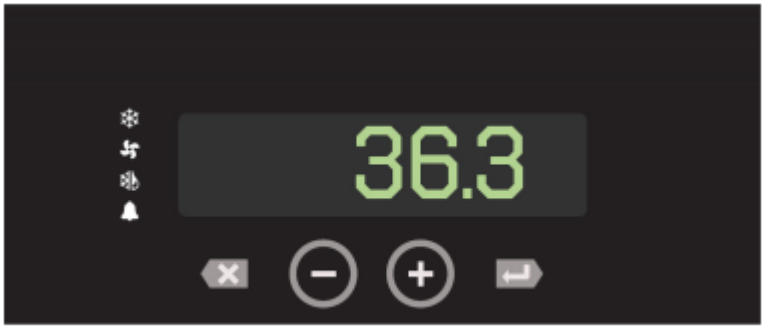
Critical Warning: Never apply jumper power to components while they remain connected to the control board. Doing so risks damaging the control circuitry, voiding warranty coverage, and creating a safety hazard.

Service Tip: Always confirm the component's wiring is clearly labeled and fully separated from control logic before energizing for individual testing.

4b. Legacy Controls

Some previous Traulsen Hot Food cabinet were equipped with previous advanced electronic control system designed to precisely regulate operation and monitor performance.
While most current units feature the NexGen electronic control, technicians may still encounter legacy controls on previous Traulsen models. These older interfaces continue to function reliably but may display fewer diagnostic features than the NexGen platform. In some applications, the green NexGen display is also present, offering simplified monitoring and regulation functions.

All Traulsen controls are factory-programmed and shipped ready for operation. Note: Hot Food cabinets are shipped from the factory in the "OFF" position and must be powered on and adjusted to the desired setpoint prior to use.



Control Displaying Cabinet Temperature

On the Left Side of the display there are four icons that reflect the status of the compressor, fans, defrost and alarms. At the center of the display is a Text Display that shows the Cabinet Temperature. It will also be used to access the Control Settings. Below the display are four tactile buttons used to access the control menu system.

Status Symbols

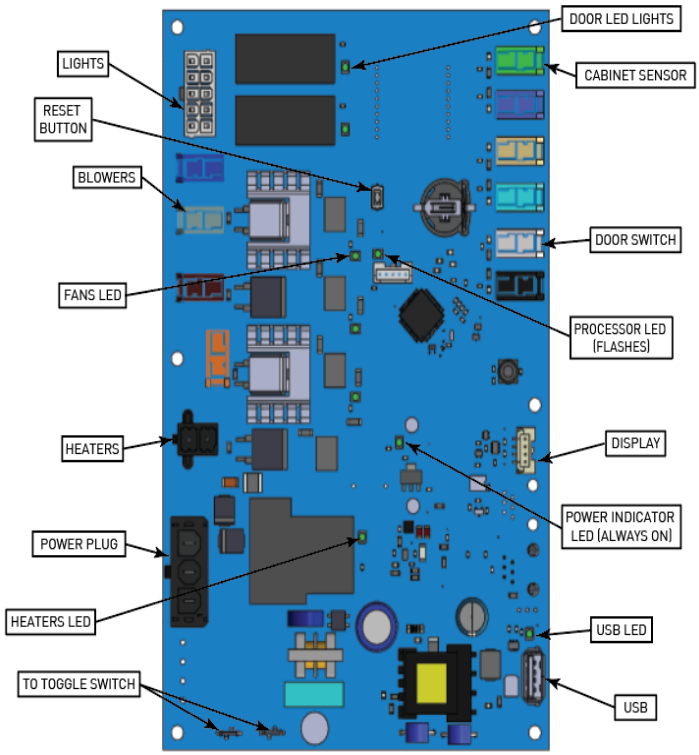
STATUS SYMBOL	DESCRIPTION
❄	Compressor Status / Heater Status
	Fan Status
	Defrost Status
	Alarm/Door Open

Table 1

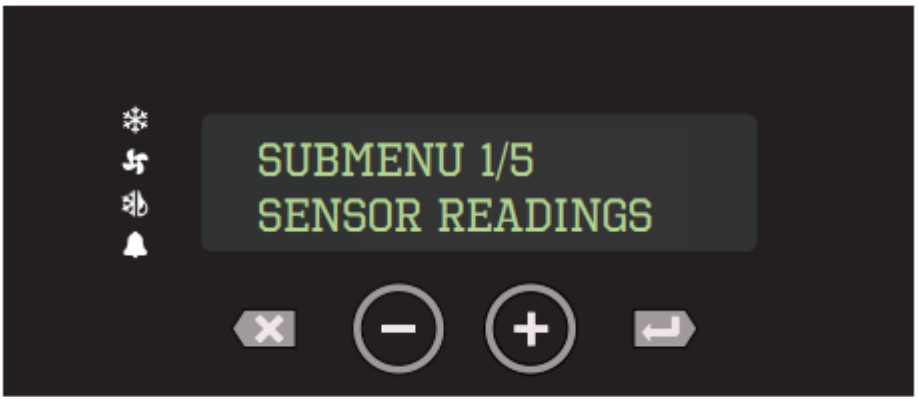
Push Button Symbols

BUTTON SYMBOL	DESCRIPTION
	Escape / Back / Cancel Key
⊖	Minus (-) / Previous Key
⊕	Plus (+) / Next Key
↵	Enter / Modify Key

Table 2



IMPORTANT NOTE: While accessing the Controller Menu, two line, small font text messages will be displayed. In this document two line messages are denoted as follows, "TopLine, BottomLine". For example, the text displayed in image below is denoted as follows, "Submenu 1/5, Sensor Readings"



4b.1 Change the Setpoint

The setpoint of the unit can be changed by following the steps below:

- While the cabinet temperature is displayed (home screen), press the Enter / Modify Key. "SubMenu 1/5, Sensor Readings" will display.
- Push the Plus(+) or Minus(-) Key to navigate the submenu system until, "SubMenu 2/5, Settings" displays.
- Push the Enter/Modify Key, "Enter Password, 0" will display.
- Push Enter/Modify Key two times, to view the setpoint. If the unit has a setpoint of 36,"TempCabSP, 36" will display.
- Push the Enter/Modify Key, the control will now enter edit mode.
- Push the Plus(+) or Minus(-) Key to change the setpoint to the desired number.
- Push Enter/Modify Key once to register the new value.
- Push Enter/Modify Key again to confirm the change. The new setpoint will now display.
- Push the Escape/Back/Cancel Key(x) twice to exit the submenu system. The cabinet temperature will display

4b.1.1 Change Fahrenheit (°F) to Celsius(°C)

- While the cabinet temperature is displayed (home screen), press the Enter/Modify Key. "SubMenu 1/5, Sensor Readings" will display.
- Push the Plus(+) or Minus(-) Key to navigate the submenu system until, "SubMenu 2/5, Settings" displays.
- Push the Enter/Modify Key, "Enter Password, 0" will display.
- Push the Plus(+) or Minus(-) Key to set the number to 5, then push the Enter/Modify Key.
- Push Plus(+) or Minus(-) Key to set the second number to 5, then push the Enter/Modify Key.
- Push the Plus(+) or Minus(-) Key to set the third number to 5, then push the Enter/Modify Key. (The password is 555).
- Push the Enter/Modify Key again, to enter the Settings Menu. "TempCabSP" will display.
- Push the Plus(+) or Minus(-) Key to navigate the Settings submenu system until, "TempUnits" displays.
- Push the Enter/Modify Key, the control will now enter edit mode and "+/-, ToSelect" will display.
- Push the Plus(+) or Minus(-) Key to select "DegF" for Fahrenheit or "DegC" for Celsius and push the Enter/Modify Key once to register the new value.
- Push the Enter/Modify Key again to confirm the change.
- Push the Escape/Back/Cancel Key(x) twice to exit the submenu system.

4b.2 Access Power Failure Data

While the cabinet temperature is displayed (home screen), press the Enter/Modify Key. "SubMenu 1/5, Sensor Readings" will display.

- Push the Plus(+) or Minus(-) Key to navigate the submenu system until, "SubMenu 4/5, Alarms" displays.
- Push the Enter/Modify Key to navigate the alarm menu board.
- Push the Plus(+) or Minus(-) Key to navigate to parameter "Timeofpowerdown". Here the user will see the time duration the unit was powered down.
- Push the Plus(+) or Minus(-) Key to navigate to parameter TempCabAtPowerUp". Here the user will view the temperature recorded at the moment power was restored to the unit. This will be the warmest temperature during a power loss event.
- To clear the alarm, push the Enter/Modify Key again and use the Plus(+) or Minus(-) Key to navigate to parameter "PowerFailAlarm".
- The parameter will display "Alarm". Push Enter/Modify Key twice to clear the alarm so the parameter displays "Normal".
- Push the Escape/B[1]ack/Cancel Key(x) twice to exit the submenu system.

NOTE: You can use the Plus(+) or Minus(-) Key in a similar fashion to review the status of other alarms while on step
For a list of alarms and other parameters please see section

	PARAMETER	SUBMENU	PASSWORD	DATA
COMMONLY REFERENCED	TempCab	Sensor Readings	N/A	Cabinet Temperature
	TempEvap	Sensor Readings	N/A	Evaporator Coil Temperature
	TempLiqLine	Sensor Readings	N/A	Liquid Line Temperature
	TempCabSp	Settings	555	Temperature Setpoint
	TempCabSPDiff	Settings	555	Cabinet Temperature Differential
	CabFanMode	Settings	555	Fan Mode
	DefrostSP	Settings	555	Defrost Setpoint
	DefrostMode	Settings	555	Defrost Mode
	DefrostInterval	Settings	555	Interval between Defrosts
	SerialNumber	Settings	555	EOL: Serial Number
ALARMS	TempCabAtPowerUp	Alarms	N/A	Temperature recorded at the moment power returned
	TimeOfPowerDown	Alarms	N/A	Time recorded at the moment of power failure
	TimeOfPowerUp	Alarms	N/A	Time recorded at the moment power returned
	PFDuration	Alarms	N/A	Duration of power failure
	PowerFailAlarm	Alarms	N/A	Power failure alarm status: - "Alarm" indicates power failure - "Normal" indicates alarm has been cleared by user
	TempCabAlarm	Alarms	N/A	Cabinet Temperature Alarm Status
	TempEvapAlarm	Alarms	N/A	Evaporator Temperaure Alarm Status
	TempLiqLineAlarm	Alarms	N/A	Liquid Line Temperature Alarm Status
	LiqLineSDAlarm	Alarms	N/A	Liquid Line Shutdown Status
	EvapSDAlarm	Alarms	N/A	Evaporator Shutdown Status

1

4b.3 Electronic Controls Overview

Your Traulsen Hot Food cabinet is equipped with an advanced electronic control system designed to precisely regulate operation and monitor performance. This state-of-the-art control automatically maintains proper conditions while providing visual and audible alarms when service issues occur.

While most current units feature the NexGen electronic control, technicians may still encounter legacy controls on earlier Traulsen models. These older interfaces continue to function reliably but may display fewer diagnostic features than the NexGen platform. In some applications, the green NexGen display is also present, offering simplified monitoring and regulation functions. **All Traulsen controls are factory-programmed and shipped ready for operation. Note: Hot Food cabinets are shipped from the factory in the "OFF" position and must be powered on and adjusted to the desired setpoint prior to use.**

4b.4 Daily Operation – Hot Food Cabinets

Turning the Unit OFF:

-Press the Escape/Back/Cancel Key (X) repeatedly until the display goes blank.
-A blank display confirms that the unit is fully powered down.

Turning the Unit ON:

-Press any key to re-activate the control.
-Once powered on, the display will illuminate and resume normal cabinet operation.

Operational Notes:

-Always verify the display is active before loading or monitoring product.

-If the display remains blank after pressing a key, confirm the unit has power and check the circuit breaker before proceeding with further troubleshooting.
-During service or extended downtime, power the unit OFF to prevent unnecessary energy consumption and heat cycling.

4b.5 Control Guidance – Hot Food Cabinets

Hot Food cabinets are equipped with control instruction stickers located near the display panel. These stickers provide operators with basic guidance on how to turn the unit **ON/OFF** and make standard adjustments. Operators should rely on these stickers for routine use and reference during daily operation.

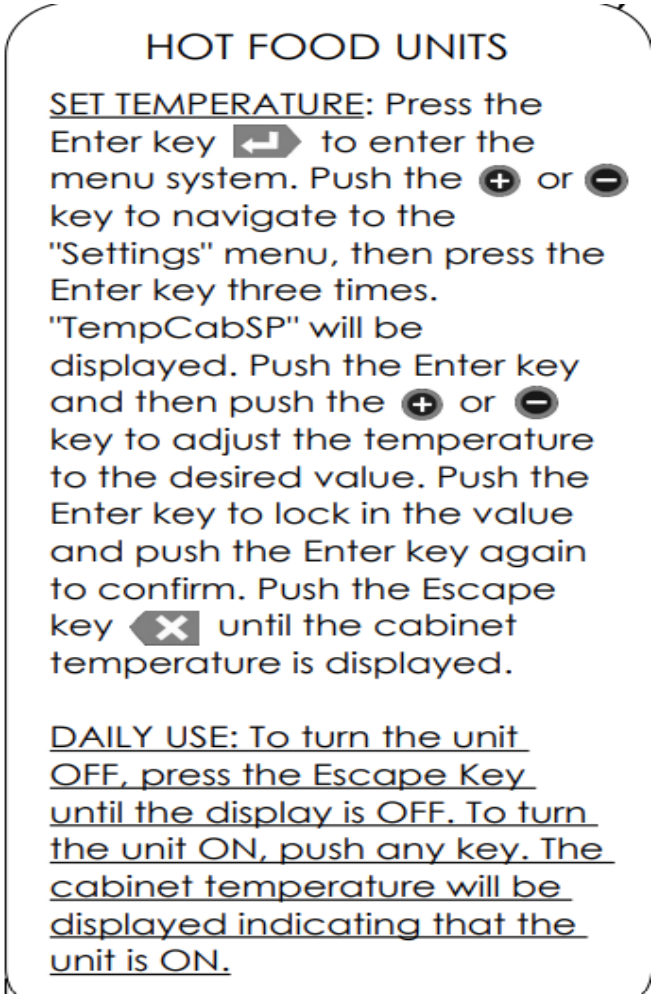
It is important to note that only authorized service technicians should make changes to advanced settings, calibration values, or system parameters. Unauthorized adjustments may result in improper operation, inconsistent holding temperatures, or voided warranty coverage.

For Safe and Effective use:

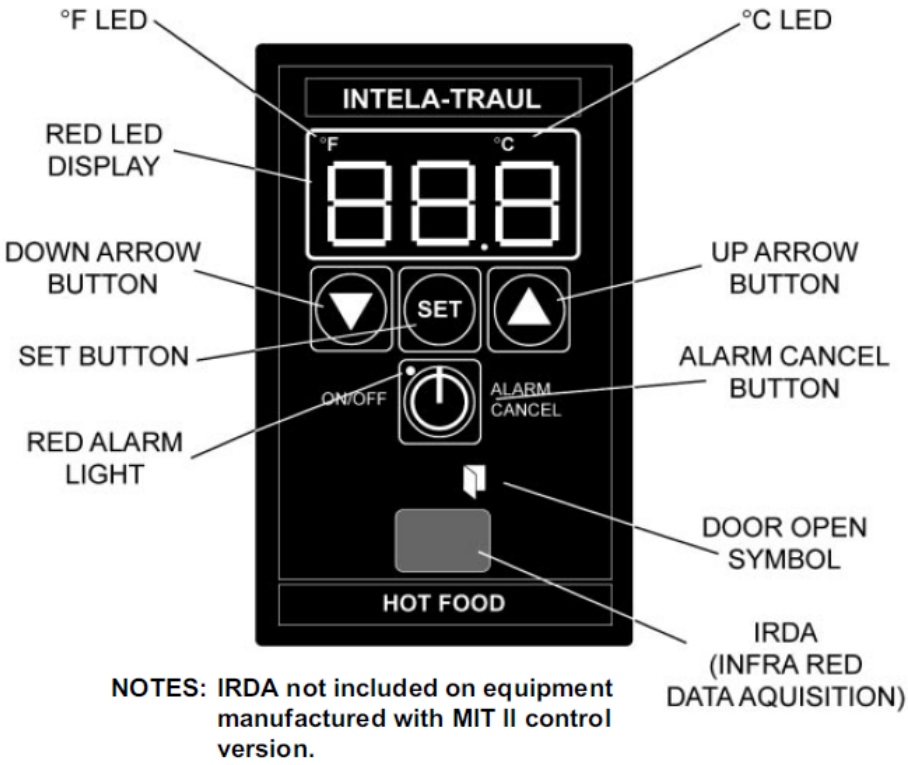
Operators should follow the control sticker instructions for basic functions such as ON/OFF operation and setpoint verification.

Do not attempt to bypass alarms or modify factory-programmed limits.

Contact a certified Traulsen service provider if advanced adjustments or troubleshooting is required.



4b.6 Intela-Traul Control Pre 2017 Hot Food Cabinet Start-UP (MIT version):



NOTES: IRDA not included on equipment manufactured with MIT II control version.

When power is first applied to the unit, you must set the temperature by pressing the "SET" and "UP ARROW" buttons at the same time using equal pressure with both thumbs, until the temperature appears on the display.

Next, use the "UP"button to reach the desired temperature (maximum 180°), then press and release the "SET" button to lock it in.
After this is done you can turn the control ON and OFF by pressing and releasing the "ALARM CANCEL" button.
Be aware to watch for the display constantly reading "OFF". This is an indication of a possible faulty cabinet sensor.
To remedy, replace the sensor and reset the operating temperature.

Startup & Toggle Switch Location (Hot Food Models)

Before troubleshooting or reporting a heating issue on Traulsen hot food units, verify that the external toggle switch is in the ON position. This manual power switch is often located behind the louvered front panel, depending on the model and configuration. If this switch is left in the OFF position, the unit will not energize the control board or heating system, even if the controller appears powered.

Field technicians should always inspect this toggle switch during initial service calls or startup checks.

MIT Controller: Operational ON/OFF Functionality

Traulsen models equipped with the MIT digital control include a front-facing ON/OFF button, which allows operators to quickly enable or disable the heating cycle without altering the programmed temperature setpoint.

Press the "O" button (power symbol) briefly to place the unit into OFF mode. The display will indicate "OFF."
Press the "O" button again to return to normal operation. The control will resume the last programmed setpoint and initiate heating as required.

Important Note:

This ON/OFF feature is disabled when the control is in an active alarm state. If the red alarm LED is illuminated, the unit must be serviced, and the underlying fault resolved before normal heating operation can be restored.

Technicians should investigate any alarms via the control's diagnostic mode or error code display and clear them as needed to reactivate the ON/OFF functionality.

4b.7 Control Module (Relay Board) – Testing and Troubleshooting

The relay module, often referred to as the control head or power board, serves as the central hub that distributes power to core components such as the blower (fan motor), door heater, and alarm/controller return signals. Field technicians should use the following diagnostic guide to verify proper operation during service calls.

Accessing the Module

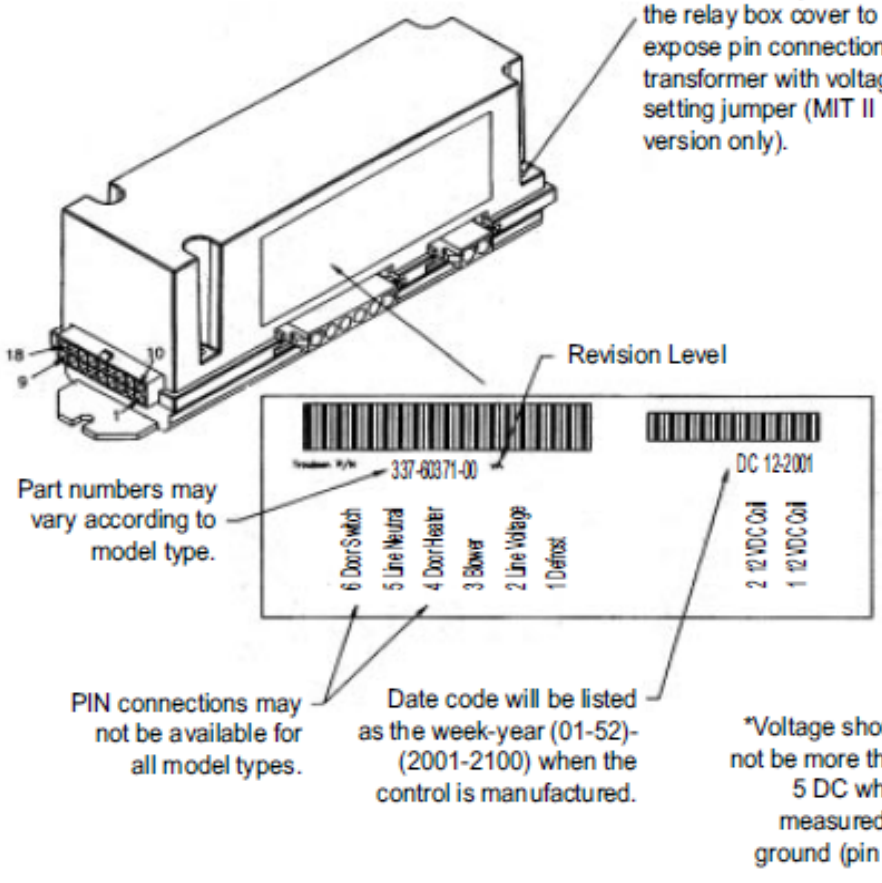
Disconnection wiring connections to the control relay terminals and configuration pins.
Ensure the module is properly grounded via Pin18 (Black – 120V AC).
Always verify wiring against the module's model-specific connector legend, as part numbers and pin usage may vary.

Component Testing Procedures

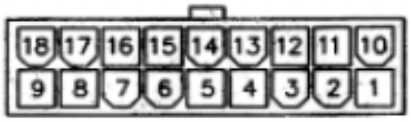
NOTE: All pins on this connection should not read more than 20V AC unless specified.
Always test between the pin and a verified neutral or ground when checking AC voltages.

Display and Voltage Verification

For accurate troubleshooting, verify that component icons on the display are illuminated when their function is active. For example, when the fan icon is lit, the board should be sending 120V AC to the fan circuit. Measure the correct output pin to ground to confirm that the expected voltage is present and properly supplied.



NOTE
All pins in this connection should not read more than 20 VAC



Connector Pin No.	Color	Signal
1	Gray	Blower*
2	Orange	Door Heater*
3	Green	Alarm From Controller
4	Black	Return To Horn
5		
6		
7	White/Purple	-RS485
8	Black	Ground
9	White	12 VAC
10	Blue	Compressor*
11	Purple	Defrost*
12	Yellow	Door Open Signal
13	Red	Power to Horn
14		
15		
16	Pink	+RS485
17	Red	12 VDC to Controller
18	Black	12VAC

*Voltage should not be more than 5 DC when measured to ground (pin 8).

4b.8 Component Testing Procedures

NOTE: All pins on this connection should not read more than 20V AC unless specified. Always test between the pin and a verified neutral or ground when checking AC voltages.

Fan Motor

Pin 1 (Gray): Fan output.

Expected Voltage: 120V–220V AC depending on model.
Diagnosis:
When the blower icon is lit on the display, check for voltage at Pin 1.
If voltage is present but the fan does not run, inspect the fan motor leads and test motor windings for continuity.
If no voltage is present and the blower icon is illuminated, the relay board may be faulty.

Door Heater

Pin 2 (Orange): Door Heater output.

Expected Voltage: 120V–220V AC depending on model.
Diagnosis:
When cabinet doors are closed and ambient conditions are humid, the controller may energize the door heater.
Use a multimeter to test for voltage at Pin 2 when the heater icon is active.
If the heater does not energize despite proper voltage, check the heater harness and resistance (open circuit indicates failure).

Alarm/Controller Return

Pin 3 (Black): Return path from display/controller.

Used for: Signal feedback loop to the relay module.
Diagnosis:
No direct voltage output expected. Used for logic signal return only.
Ensure secure connection and continuity from display to module.
Input Signal Checks (From Display/Control)

Door Switch Signal

Pin 14 (Yellow): Door switch signal input.
Expected Behavior:
When door is open, signal is sent to board to interrupt blower and activate light.
If fan stays running or light fails, check for continuity across door switch.
To isolate switch: Unplug door switch harness and install jumper between Yellow and common. If the fan turns off/light activates, replace the door switch.

Additional Critical Pins

Pin	Color	Function
5	White/Purple	4 HRRS
6	White/Gray	24 HRRS
9	Blue	Defrost Signal
10	Gray	Fan Signal
18	Black	120V AC (Line)
17	Red	12V DC to Controller

4b.9 LED Relay Indicator Icons

When any icon on the display (e.g., fan or heater symbol) is lit, the corresponding relay on the control module should be engaged. This is a direct cue to perform voltage validation on the relevant output pins.

Example Troubleshooting Workflow

If the blower is not running, but the fan icon is active:

Check Pin 1 for 120–220V AC.

If voltage is present, inspect fan.

If no voltage, suspect relay failure; replace the board.

If the door switch is suspected:

Open and close the door.

Look for display light changes and fan interruption.

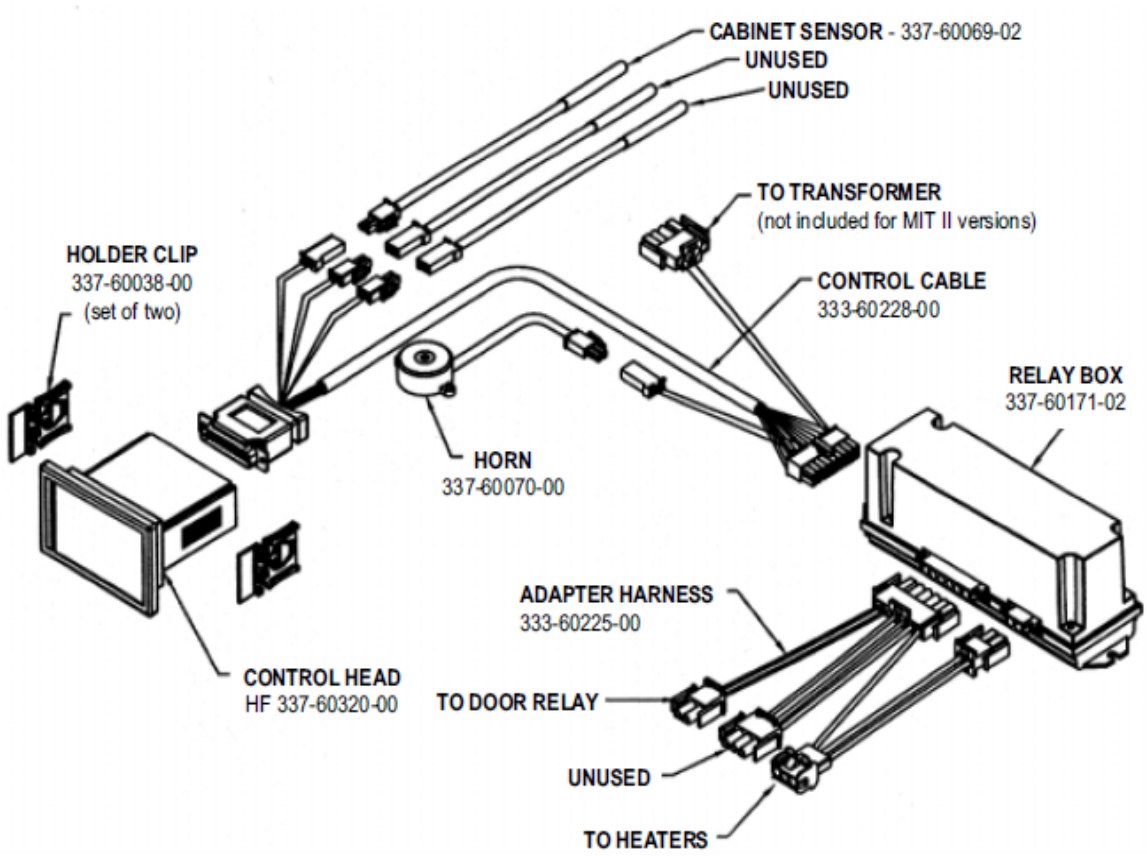
Bypass switch to confirm its integrity.

If no components power on, verify power at Pin 18.

If no voltage, inspect incoming power and toggle switch (behind louver panel).

MIT-Specific Note
Units using the MIT control may include an internal voltage selection jumper. Refer to model-specific data to confirm correct jumper setting for 115V or 230V operation.

R-Series Heated Cabinet Vertical Controller: Parts assembly for MIT control versions only



4b.10 Removal/Installation- Replacing Intela-Traul Controls

All Vertical Controllers:

To remove INTELA-TRAUL® (p/n's 337-60090-00, 337-60091-00 and 337-60092-00) and G-Series (p/n's 337-60093-00, 337-60094-00 and 337-60095-00) Vertical Controller from the unit in which it is installed, proceed as follows

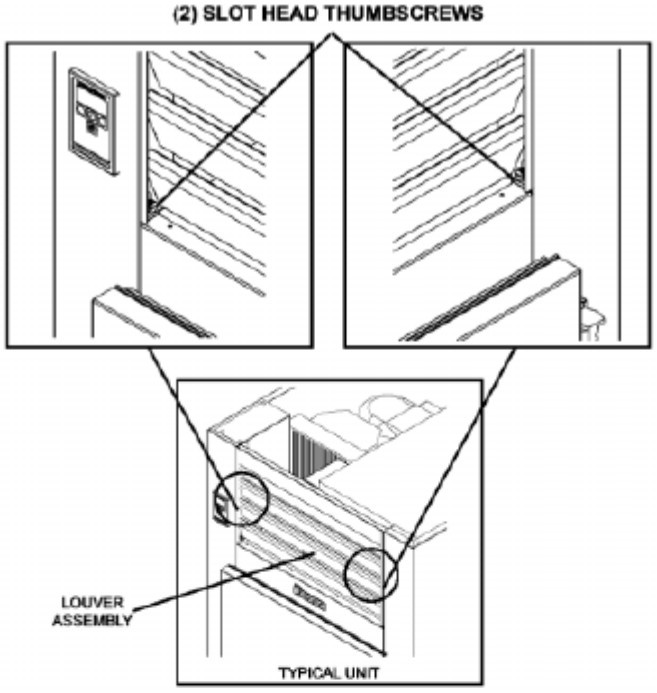
Louver Panel Removal

Tools Required:
Flat-head screwdriver

Procedure:

Remove Lower Thumb Screws

At the front of the unit, locate the two (2) slotted thumb screws positioned in the bottom corners of the louver panel. Manually remove both thumb screws. If necessary, use a flat-head screwdriver to assist in loosening.
Caution: Set the screws aside in a secure location for reassembly.

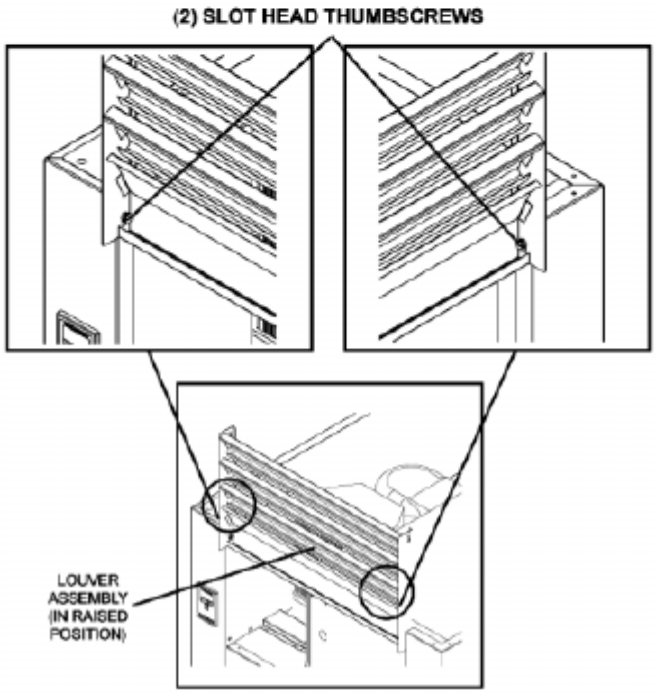


Release Lower Panel and Swing Upward

Gently swing the louver panel upward and away from the cabinet. The panel is hinged and will pivot until it reaches the built-in stop position.
Tip: Support the panel during movement to prevent stress on hinge points.

Remove Upper Thumb Screws

While the panel is in the open position, locate the two (2) upper slotted thumb screws at the top of the louver panel. Remove both screws and set them aside with the lower set. Carefully lift and remove the entire louver assembly from the unit.
Note: Take care not to damage any wiring or components behind the panel when removing.



Controller Retrofit – MIT to NexGen

MIT controls are now considered obsolete and are no longer manufactured or supported. When servicing a unit equipped with an MIT controller, the approved corrective action is to install the NexGen retrofit kit. This ensures full functionality, access to updated diagnostics, and long-term serviceability.

The retrofit kit includes:
- NexGen controller assembly
- Updated harness/adapters for proper connection
- Mounting hardware and bracket modifications (as required)
- Installation guide with wiring schematics and programming instructions

During removal of the MIT controller, carefully label all wiring connections. Note that the NexGen retrofit may consolidate or reassign some terminals, so refer closely to the supplied schematic during installation.

4b.11 Controller Removal Procedure (Hot Food Units – NexGen/MIT)

WARNING: Disconnect all power to the unit before beginning any service procedures. Failure to do so may result in electrical shock, injury, or equipment damage.

Accessing the Controller

• Remove the three Phillips-head screws located on the top of the junction box. Set the screws aside for reassembly.
• Locate and remove the single Phillips-head screw located on the bottom of the junction box. Set this screw aside as well.
• Carefully slide the junction box forward away from the unit's front frame to expose all wiring and controller connections. Take care not to strain any wires during this step.

Disconnecting the Controller

• Identify and label all nine (9 controller connections (or five (5 connections if servicing a G-Series unit) to ensure proper re-installation.
• Gently disconnect each connector by hand. Do not pull on the wires; only pull by the connector housing to avoid damage.

Removing the Controller

• Locate the holder clips securing the controller. Firmly compress the rounded portion of the center prong on each clip, and slowly slide each clip away from the controller. Set the clips aside.
Note: Ensure that all connectors and components have been completely disconnected before proceeding to remove the controller.
• Once verified, carefully slide the controller through the mounting hole in the unit and set it aside on an anti-static surface.
Controller Re-installation Procedure
• To reinstall the controller, reverse the steps outlined above.
• Confirm that all connectors are firmly seated and properly aligned before re-energizing the unit.
• After restoring power, verify controller operation and functionality through initial startup and test mode (if applicable).

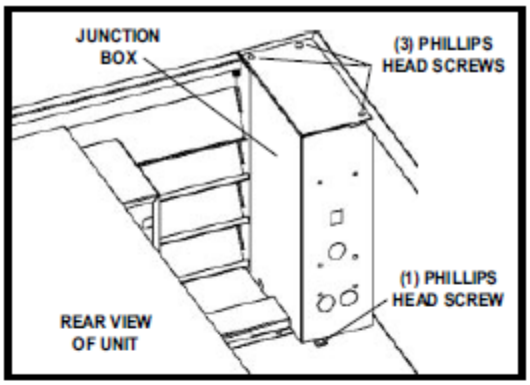
Installation Considerations

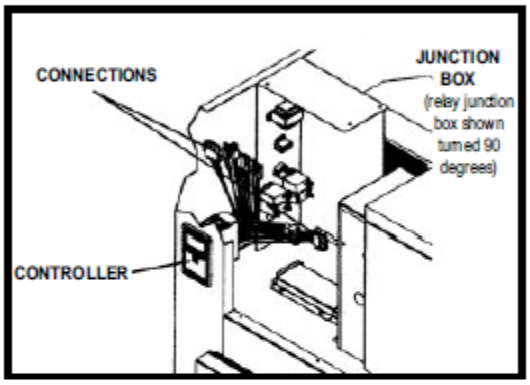
Mounting: The NexGen controller mounts in the same junction box location as the MIT controller but may require repositioning of harness clips or adjustment of strain relief fittings.

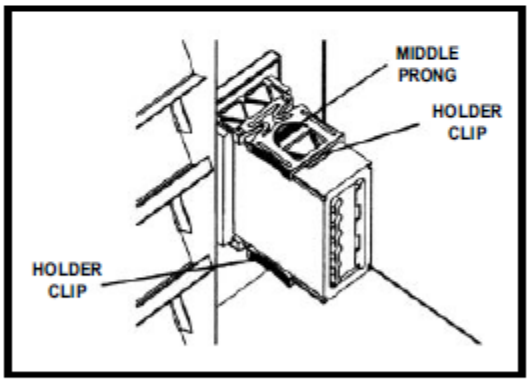
Wiring: Verify that all connectors are fully seated into the retrofit harness before applying power. Any loose or misaligned connection can result in startup errors or improper heating performance.

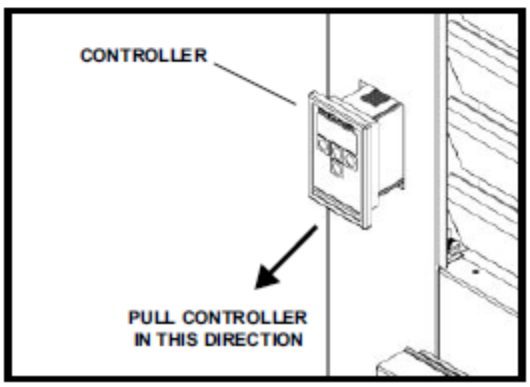
Programming: After installation, power the unit ON and confirm that the default hot food cabinet parameters are correctly loaded. Adjust setpoints only as specified in the NexGen retrofit guide.

Verification: Run a full operational test, allowing the cabinet to reach setpoint and cycle normally. Verify alarms, key functions, and ON/OFF operation using the Escape/Back/Cancel key.









4b.12 Control Retrofit Advisory: Obsolescence of Intela-Traul Controls

As of 2019, Traulsen has officially discontinued the Intela-Traul controller platform for Hot Food Holding Cabinets. These controls are no longer supported for service or replacement.
To ensure proper function and continued reliability, all Intela-Traul-equipped units should be retrofitted using Traulsen OEM Nex-Gen Retrofit Kits, which include:
-NexGen Control Board
-Wiring Harness
-Display (vertical or horizontal, depending on application)
These retrofit kits are designed to simplify field upgrades and maintain UL certification and factory performance standards.

NexGen Retrofit Kit Part Numbers

Please select the correct replacement kit based on your cabinet type, voltage, configuration (pass-through vs. standard), and power plug requirements.

Part Number	Description
-SER-60730-00	**Hot Food Cabinet, Wide, Standard or Pass-Thru, 208/115V with Power Plug**
-SER-60730-01	**Hot Food Cabinet, Narrow, Standard or Pass-Thru, 208/115V without Power Plug**
-SER-60730-02	**Hot Food Cabinet, Wide, Standard or Pass-Thru, 208/115V without Power Plug**
-SER-60703-03	**Hot Food Cabinet, Wide, Standard or Pass-Thru, 115V with Power Plug**
-SER-60703-04	**Hot Food Cabinet, Wide, Standard or Pass-Thru, 208–240V with Power Plug**

Installation Notes

All kits include instructions color coded harnesses and factory connectors to minimize installation errors.
Displays are available in both horizontal and vertical orientations depending on unit configuration.

After installation, confirm:

-All sensors are reading within normal range
-Heating circuit responds to setpoint commands
-Fan functionality

Need Assistance? For retrofit guidance, wiring help, or troubleshooting:
Contact Traulsen Technical Support
800-825-8220
service@traulsen.com

4b.12 Accessing the Engineering Level – NexGen Control

Some control parameters on Traulsen hot food units are locked at the customer level to prevent unintended changes. To modify advanced settings, technicians must first access the Engineering Level. Follow the steps below to gain entry into this mode:

Steps to Enter Engineering Level

-**Press the SET button once.**
The display will show: CUS
-Press the DOWN arrow repeatedly until the display shows: EnG
-Press the SET button again.
The display will now read 000 with the left digit flashing.
-Press the DOWN arrow until the left digit changes to 9.
-Press the SET button.
The center digit will now flash, and the display will read 900.
-Press the DOWN arrow until the center digit changes to 9.
-Press the SET button again.
The right digit will now flash, and the display will read 990.
-Press the DOWN arrow until the right digit changes to E.
The display should now read: 99E
-Press the SET button one final time.
The display will confirm by reading: FOC – indicating that the Engineering Level has been successfully accessed.

For R- and A-Series units: Use the above process as described.
For G-Series units: After reaching 99E, simply press the DOWN arrow once to access FOC.

FOC 3-digit code which identifies the .hex file loaded at the factory.
ADR Device address for NAFEM networks.
BAU Communications rate when connected into a NAFEM network.
NAF Allow the control to communicate with a NAFEM network.
SPH High value of desired cabinet temperature range.
SPL Low value of desired cabinet temperature range.
SHL Lowest temperature of allowed range for setting of SPH.
SHH Highest temperature of allowed range for setting of SPH.
SLL Lowest temperature of allowed range for setting of SPL.
SLH Highest temperature of allowed range for setting of SPL.
RO Difference, in degrees, between displayed & measured temperature.
HI The highest temperature the cabinet air temperature is allowed to reach before triggering a High-Temp alarm.
LO The lowest temperature the cabinet air temperature is allowed to reach before triggering a Low-Temp alarm.
SCL Sets the temperature display scale (Fahrenheit or Celsius).
HAD Time, in minutes, that the controller delays triggering the High-Temp alarm at any start-up or at the end of a defrost cycle.
LAD Time, in minutes, that the controller delays triggering the Low-Temp alarm if cabinet air temperature equal or below SPL setting.
AC The amount of time, in minutes, that the compressor must be off between cycles.
DEF Defines the type of heat used to defrost the coil: Electric, Hot Gas, None or Off-Cycle.
IBD The amount of time, in hours, between the end of the drip time& start of the next defrost cycle.
DDC The maximum amount of time, in minutes, that the heat will be on during a defrost cycle.
CDE The temperature of the evaporator coil that indicates the end of a defrost heat cycle.
DDE The amount of time, in minutes, between the defrost heat being turned off and the compressor turning on.
BDD The delay time, in minutes, between the end of the drip time and before the evaporator blower turns on.
BSD The temperature of the evaporator coil that triggers the evaporator blower to turn on after drip time ends.
ODD The maximum amount of time, in minutes, that the display will read the last temperature recorded before entering the defrost cycle.
SD Allows a technician to start or stop a defrost cycle.
CFA Allows the customer to turn the clogged filter alarm ON/OFF (R & A Series only).
CCR The minimum amount of time, in minutes, that the compressor must be running before generating a clogged filter alarm.
CDL The discharge line temperature that will trigger a clogged filter alarm.
DOA Allows the customer to turn the door open alarm ON/OFF in units equipped with the appropriate hardware.
DAD The time, in minutes, that a door must be open before triggering a door open alarm.
-32-

VIII. CONTROL PARAMETERS
APD The amount of time, in seconds, that a visual alarm text will be displayed.
ATD Alarm temperature delay.
AAS Allows the customer to set the type of audible alarm style, either Blast, OFF or Continuous.
CL Allows the customer to set the time of day.
DAY Allows the customer to set the date.
DS Sets daylight savings time On or OFF.
DL1 Selects the time to start a defrost lockout.
DL2 Selects the time to start a defrost lockout.
DL3 Selects the time to start a defrost lockout.
DL4 Selects the time to start a defrost lockout.
DCF Allows the customer to set the percentage of time that the door perimeter heaters will operate, to control surface condensation.
CON The amount of time the compressor will run in the event of a cabinet air sensor failure.
COF The amount of time, in minutes, that the compressor will be OFF in the event of a cabinet air sensor failure.
EL Displays the evaporator temperature at the time (press set or the up arrow button to display this feature).
DL Displays the discharge line temperature at the time (press set or the up arrow button to display this feature).
CB When activated (by pressing the set or up arrow buttons), will display the cabinet air temperature at the time the button is pressed.
PLn When activated will display the approximate line voltage.
RCO Will energize the compressor relay for 10 seconds when activated.
RdF Will energize the heater relay for 10 seconds when activated.
RFA Will energize the blower relay for 10 seconds when activated.
RDH Will energize the door heater relay for 10 seconds when activated.
Pro Parameter used only when re-flashing the program memory.
CEP When activated, will return all of the parameters to the initial factory settings.
REF Displays the revision level of the software loaded into memory.

5. Electrical

Electrical Requirements and Wiring Integrity in Traulsen Hot Food Units

Dedicated Circuitry and Voltage Ratings

Traulsen hot food holding cabinets are designed with specific electrical requirements that must be met to ensure safe and reliable operation. All units—whether 120V or 220V—must be connected to dedicated electrical circuits that match the unit's nameplate voltage and amperage ratings.

A dedicated circuit ensures consistent voltage delivery, prevents overloading, and isolates the unit from fluctuations caused by other connected equipment.

Important: Shared circuits can cause erratic performance, nuisance tripping, or control board faults due to unstable voltage conditions.

5.1 Incoming Voltage -120V vs. 220V Operation

120V Units are typically used in smaller installations or where standard power outlets are available. These units use a single hot and neutral conductor with a ground.

220V Units are commonly found in high-capacity or institutional applications where more power is required. These systems receive two hot legs of 110–120V each, creating a combined potential of 220–240V.

Although incoming power to 220V units is higher, the individual components within the unit—such as fans, controls, and lights—may still operate on 120V. This requires proper step-down wiring within the cabinet.

Harness Design and Power Distribution see (fig 5.1 pg.48)

- In 220V units, Traulsen uses a specialized connection harness to manage voltage distribution. This harness separates the incoming 220V power across two legs:
- One leg feeds high-voltage components such as heating elements
- The second leg is stepped down, or routed through the control system, to supply 120V-rated components such as fan motors, light circuits, or the control board.

Failure to follow the wiring diagram exactly or using incorrect harness connections can result in applying full 220V to a 120V-rated component, particularly fan motors. This will cause immediate damage to the component, potentially shorting the board and creating a fire or electrical hazard.

Field Servicing Guidelines

Always verify voltage at the terminal block before connecting the unit. Confirm voltage leg-to-leg (should match 220V) and leg-to-ground (each should be 110–120V).

Inspect wiring harnesses for proper connections according to the schematic provided with the unit. Pay close attention to color codes and labeled terminals.

NOTE: When replacing a harness or making field repairs, never substitute a 120V harness on a 220V unit unless it is rated for dual voltage with the correct configuration.

Fan motors, control boards, and accessory components should be verified for voltage compatibility before energizing.

Warranty Service Note:

Damage resulting from incorrect field wiring—including feeding 220V to 120V components—is not covered under warranty. Traulsen strongly recommends only qualified technicians perform electrical installation and repairs, and all work should reference factory wiring diagrams specific to the model and serial number.

5.2 Sensor Control Value Test

1. Submerge sensor bulb into a 32°F ice bath.
2. Follow steps below to view control value.

tC = Cabinet Return Air Temperature

Press Enter

Press 2X quickly to unlock keypad

Enter Technician Passcode

Good Sensor Reading

5.3 Sensor Resistance Test

To check if the sensor is reading accurately:

- Place sensor bulb in a glass of ice with a little bit of water in it (32°F)
- Use Ohm meter to test resistance. At 32°F resistance should be 32.7KΩ.

Resistance Curve:

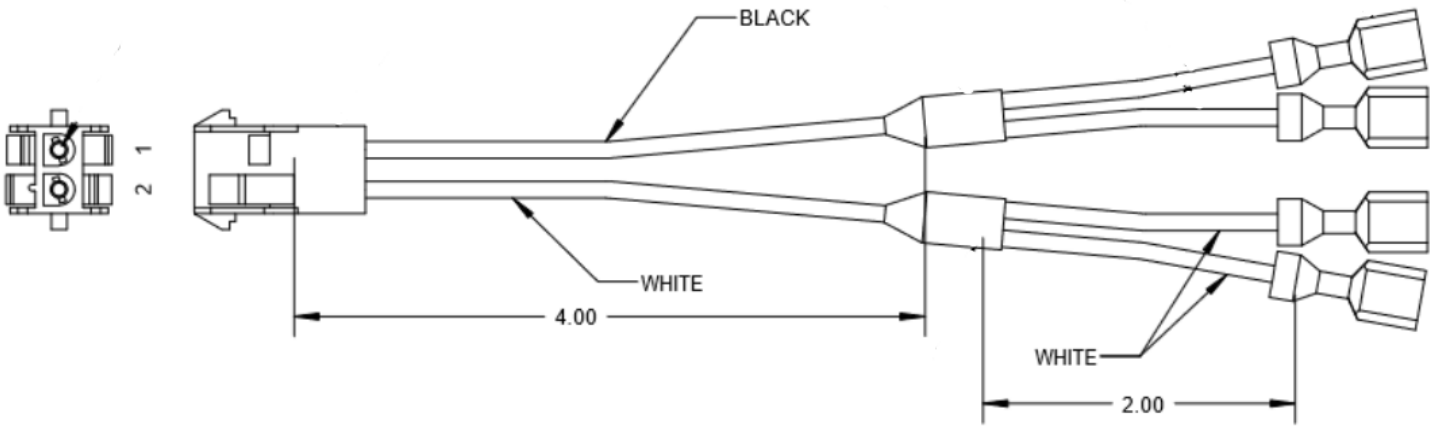
Temp C	Resistance K Ohms	Resistance Ohms	Temp F
-40.0	OL	OL	-40.0
-20.5	99.900	99000.0	-5.0
-17.7	85.200	85200.0	0.0
-15.0	72.900	72900.0	5.0
-12.2	62.400	62400.0	10.0
-9.4	53.700	53700.0	15.0
-6.7	46.200	46200.0	20.0
-3.9	39.900	39900.0	25.0
-1.1	34.600	34600.0	30.0
0.0	32.700	32700.0	32.0
1.7	30.100	30100.0	35.0
4.4	26.100	26100.0	40.0
7.2	22.800	22800.0	45.0
10.0	19.900	19900.0	50.0
12.8	17.400	17400.0	55.0
15.6	15.300	15300.0	60.0
18.3	13.500	13500.0	65.0
21.1	11.900	11900.0	70.0
23.9	10.500	10500.0	75.0
26.7	9.3100	93100.0	80.0
29.4	8.2500	82500.0	85.0
32.2	7.3400	73400.0	90.0
35.0	6.5300	65300.0	95.0
37.8	5.8200	58200.0	100.0
100.0	0.6790	679.0	212.0

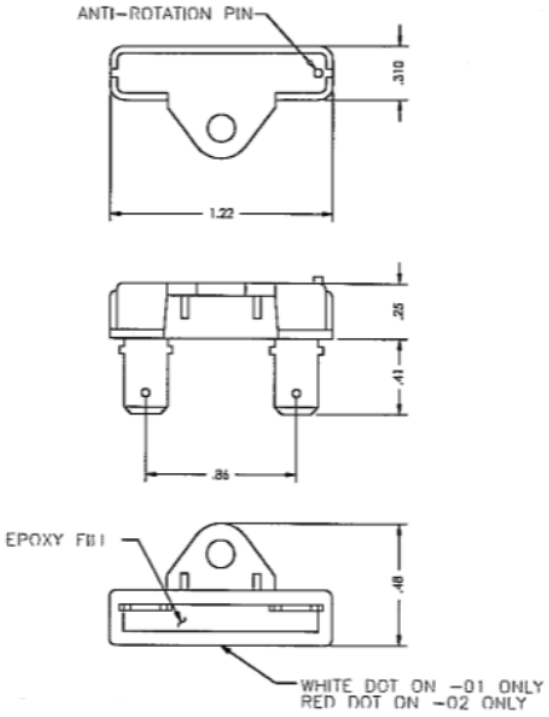
Table 5.4 Resistance Test Curve

5.4 Electrical

5.4.1 Fan Jumper

PN: 333-60328-00





5.4 Thermal Fuse

G5AP0200128C

PN: 337-31075-00

5.5 Understanding Multi-Voltage Hot Food Units – Installation & Support Guide

Some Traulsen hot food units are designed as multi-voltage systems, which is clearly marked on the data tag located on the rear of the unit. Common labels may read 208/120V, 220/115V, or similar. This indicates the unit is designed to accept two separate voltage levels for different internal components.

Why Proper Voltage Matters:

These units are engineered so that:
115–120V powers the control system, fans, and electronics.
208–220V powers the heating elements that maintain proper hot holding temperatures.
Incorrect wiring during installation—especially applying high voltage (208–220V) directly to low-voltage components like 120V fans or control boards—can cause immediate damage, including:

- Burned-out motors
- Shorted control boards
- Loss of operation and voided warranty

Installation Guidelines

- **Always check the data tag voltage information before making any electrical connections.**
- **Use a multimeter to verify the incoming power matches the required voltages.**
- **Consult the unit's wiring diagram, which is located on the rear panel, to ensure correct terminal connections for each voltage source.**

In some multi-voltage models, a electrical jumper part #333-60328-00 is installed to separate power delivery between:

- Low-voltage control components
- High-voltage heating elements
- **This jumper must not be altered or bypassed unless specified in the wiring diagram.**

Service Tip:

If a fan motor or control board is found damaged shortly after installation, verify that the power supply was correctly wired according to the dual-voltage requirements. This should be one of the first troubleshooting steps in a no-power or blown-component call.

Final Check: Before powering the unit:

- Verify the incoming voltage using a meter at the terminal block.
- Then verify the voltage feeding the fan motors (grey terminal/wires). In some models, 208V fan motors are used, so always confirm the required fan voltage before replacing or wiring any components.

Technicians should also confirm that the facility's electrical service matches the unit's rated requirements before installation begins.
Inconsistent or fluctuating power sources can cause intermittent control failures or false error codes that are difficult to diagnose.
It's also helpful to verify grounding and neutral separation, especially in older buildings where shared circuits may exist.
During service calls, asking the customer if any recent electrical work was performed can provide critical clues in diagnosing voltage-related issues.
If a component has failed prematurely, always inspect for signs of thermal damage or arcing, which can suggest over voltage conditions.

Maintaining a record of voltage readings taken at installation can also serve as a reference point during future troubleshooting.

6. Hot food Fan Motor Troubleshooting

6.1 Steps for Troubleshooting R/A/G Hot food Fan (PART# 338-60030-00)

First verify fan icon is illuminated on the display indicating a call for the evaporator fan. Remember the fan will shut off when door is open, so if you open door to physically check if fan is running you will need to disconnect white door switch connector from control board.

Fig. 6.1a Heater (fan) Bank

Fig. 6.1b Heater Fan Icon On Display

Next use an amp meter to prove the Heater fan motor is running. If fan motor is not running use voltage meter to measure the voltage at fan motor if measurement within +/- 10% of rated voltage replace the fan motor.

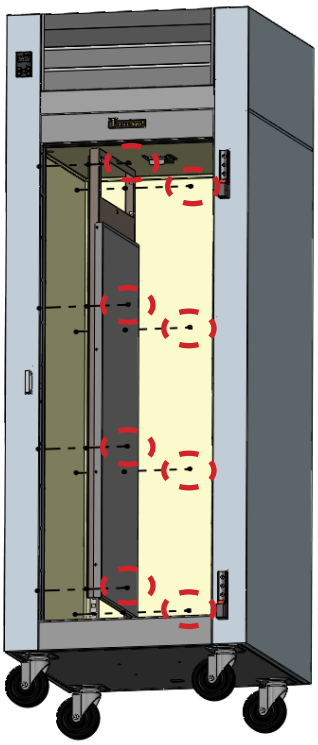


Fig. 6.1c Duct Removal

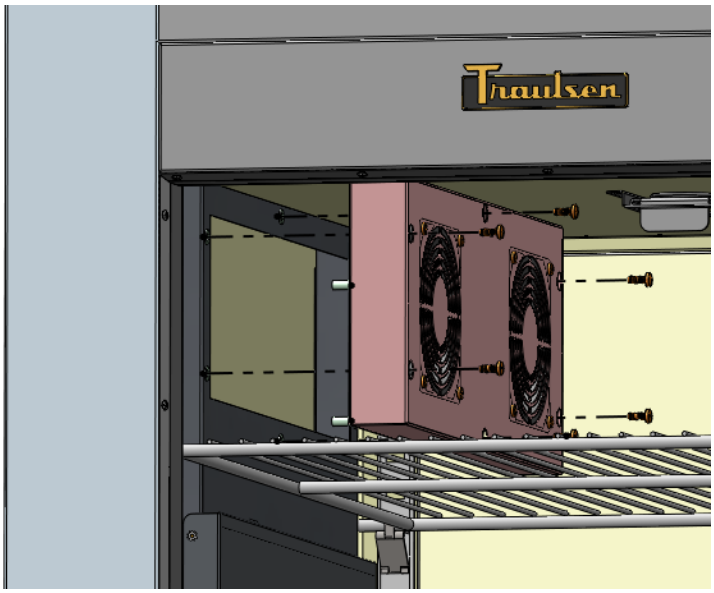


Fig. 6.1d Heater Fan Assembly Removal

6.2 Heater Coil

The tubular heater **(P/N 329-60056-00)** is the primary heating element in Traulsen hot food units, responsible for maintaining setpoint cabinet temperatures. It operates in series with the thermal fuse for overheat protection and relies on active airflow from the internal circulation fans to distribute heat evenly. If either the thermal fuse blows or the fans fail, the heater will not energize. **Technicians should verify proper voltage (120–240V depending on model) and continuity across the heater when the heating icon is active on the display.**

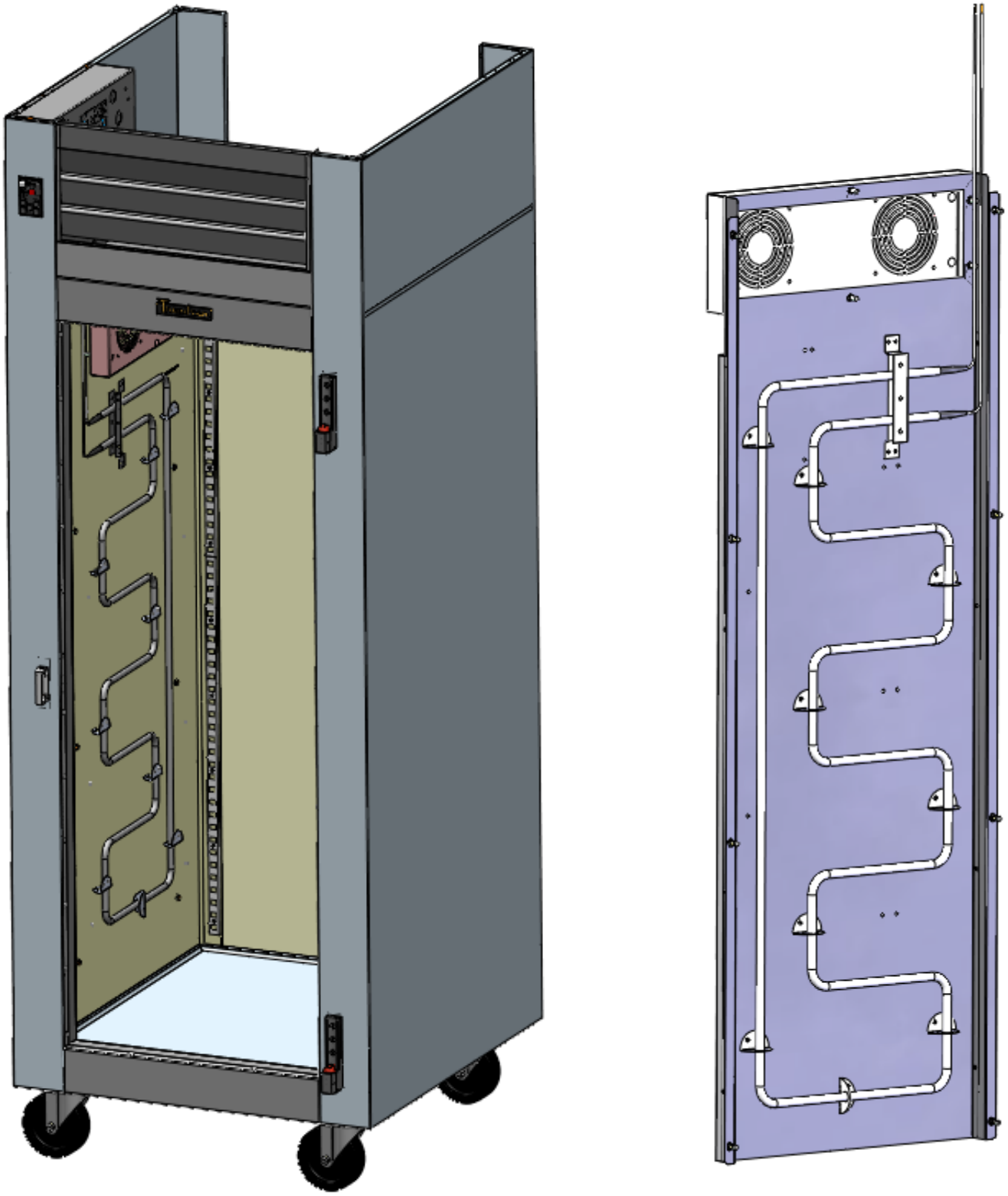


Fig. 6.2 Heater HF 240V 200W TUBULAR TRAULSEN P/N 329-60056-00

6.3.1 Heated Cabinet Troubleshooting Guide

Heating Element Testing

- Verify the integrity of the heating element.
- Power Off: Ensure the cabinet is unplugged or disconnected from power.
- Access Terminals: Locate the heating element terminals.
- Status Check: Check if the snowflake/heating icon is illumunated

Resistance Check:

- Set a multimeter to the resistance (Ω) setting.
- Measure resistance across the heating element terminals.

Expected Reading: Typically between 10–30 Ω, depending on the specific element.

Ground Check:

- Measure resistance between each terminal and the cabinet ground.

Expected Reading: Should be infinite (no continuity). Any continuity indicates a short to ground.

Thermal Fuse Testing:

How to Determine if the thermal fuse has failed.
Power Off: Ensure the cabinet is unplugged or disconnected from power.
Locate Fuse: Find the thermal fuse, typically near the heating element.

Continuity Check:

- Set a multimeter to the continuity setting.
- Place probes on both ends of the fuse.
- Expected Reading: A good fuse will show continuity (beep or zero resistance). No continuity indicates a blown fuse.

Note: Thermal fuses are single-use and must be replaced if blown.

Fan Motor Testing

Objective: Ensure the fan motor operates correctly.

Visual Inspection:

- Check if the fan icon or indicator light is illuminated when the cabinet is powered on.
- With the cabinet powered on, set the multimeter to AC voltage.
- Measure voltage at the fan motor terminals.
- measure voltage from the control board (grey)

Expected Reading: Typically 120V AC, depending on the model.
Manual Rotation: Attempt to spin the fan blades manually.

Door/Light Switch Check:

Ensure the Door switch is operational. A faulty switch can prevent the fan from running.
Test for continuity across the switch terminals when toggled. For quick troubleshooting this parameter can be accessed within the Control under the setting: **FNA (fan door action)** this setting can be turned off within the controller to quick test the fan operation before removal. Once activated Interior lights should not cut off on when the door opens/closes, this is how FNA/ door switch operates.

Testing Components from the NexGen Control Board

The NexGen control board in Traulsen hot food holding cabinets manages essential functions such as heating elements, fans, lights, and sensors. When troubleshooting issues like lack of heat, non-operational fans, or erratic performance, it's crucial to test for proper voltage output and signal continuity directly at the control board.

Heating Element Output Test

With the unit powered on and the control calling for heat (verify setpoint is above ambient), test across the heat output terminals.
Expected voltage: Typically 120V or 208–240V AC, depending on the unit's specifications.
If no voltage is present, inspect the control board's relay and associated wiring.

Fan Motor Output Test

- Ensure the unit is powered on and the control is calling for fan operation.
- Measure voltage at the fan output terminals on the control board.

Expected voltage: 120V AC.
If voltage is present but the fan isn't operating, check the fan motor for continuity and mechanical obstructions.

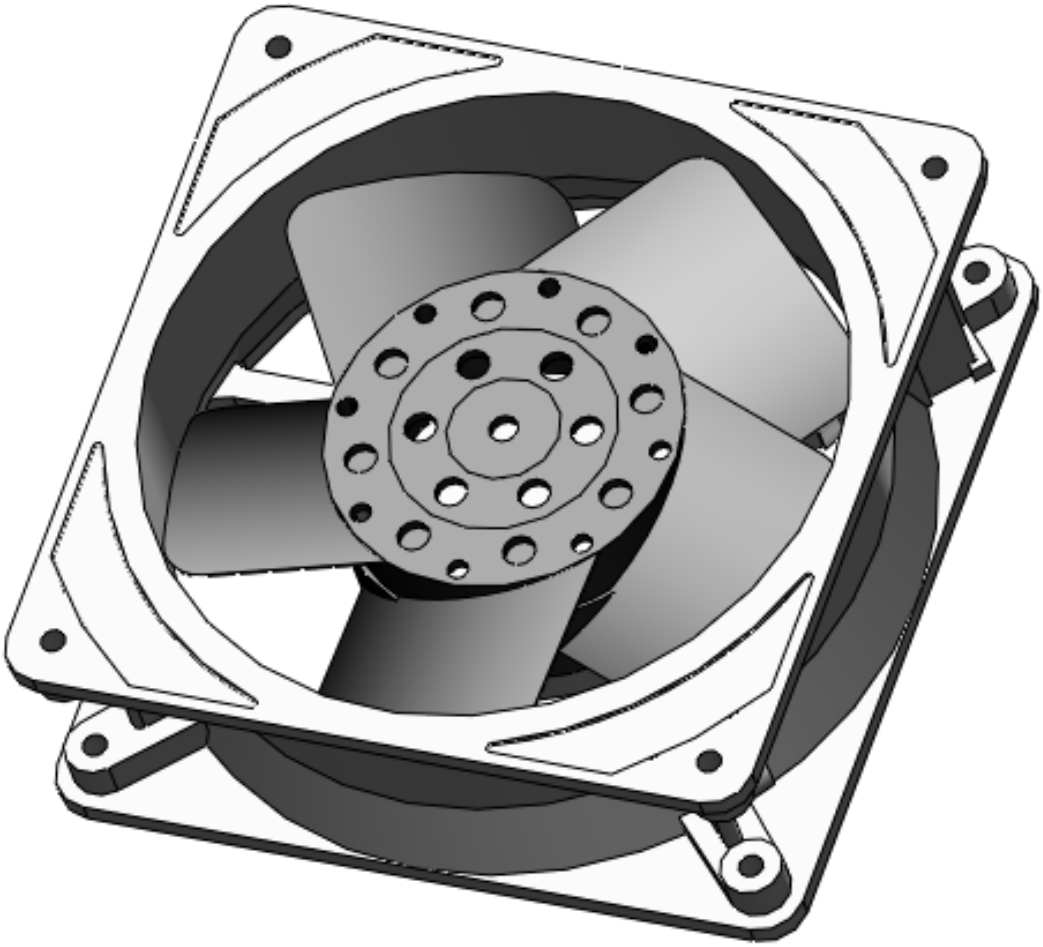


Fig. 6.3a Heater Fan Motor Cw From Lead End
TRAULSEN P/N 338-60030-00

DESCRIPTION/ SPECIFICATION	MANUFACTURER
	N/A
PART NUMBER	338-60030-00
OUTPUT	18 WATTS
AMPS	.20/.18 A
VOLTAGE	115 VAC
FREQUENCY	50/60 Hz
SPEED	3,100 RPM
ROTATION	CW
AIR FLOW	105.9 CFM

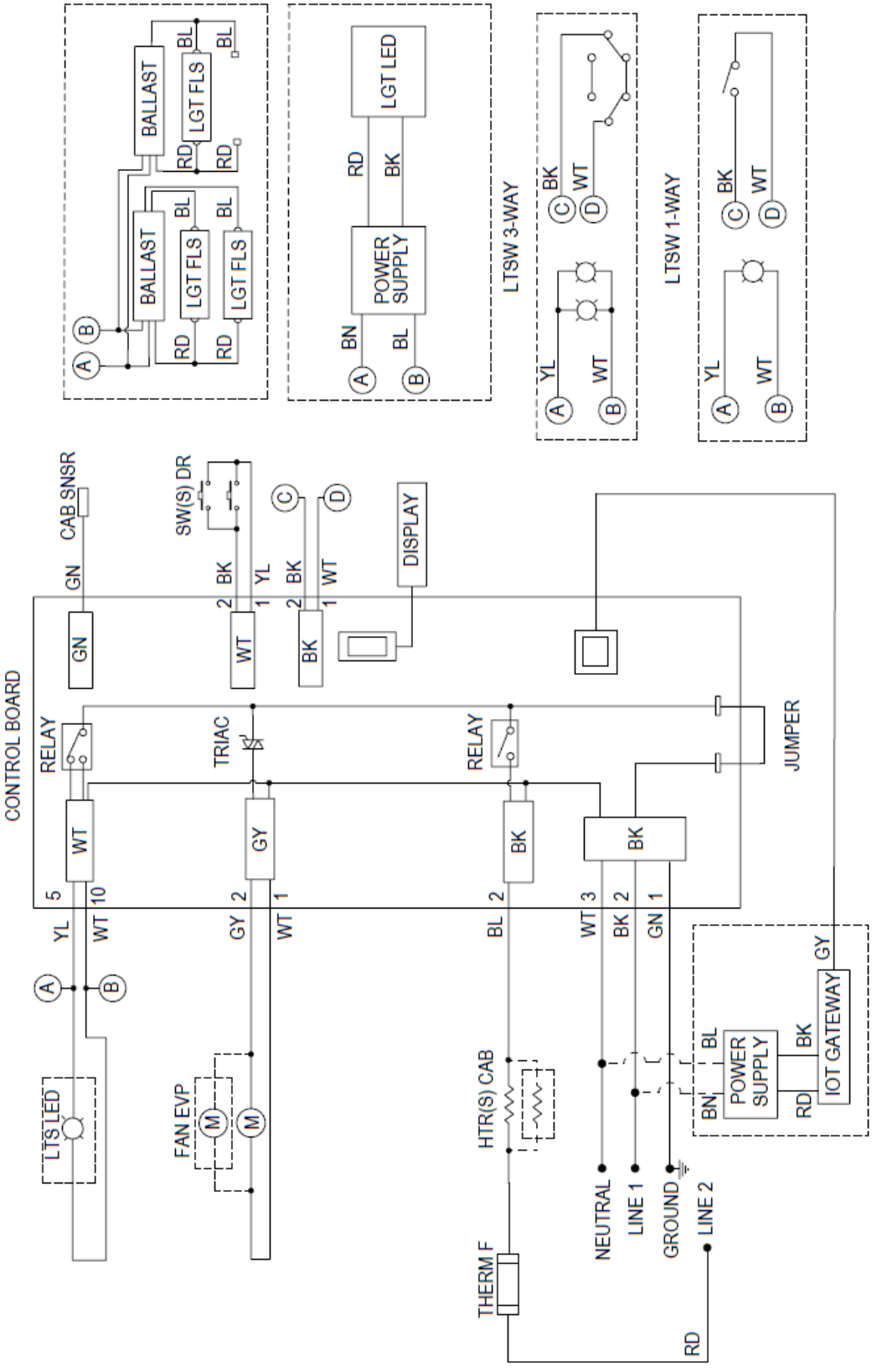
Table 6.3b Heater Fan Motor Specs 115

DESCRIPTION/ SPECIFICATION	MANUFACTURER
	N/A
PART NUMBER	338-60030-01
OUTPUT	18 WATTS
AMPS	.10/.09 A
VOLTAGE	208/240 VAC
FREQUENCY	50/60 Hz
SPEED	2,650 RPM
ROTATION	CW
AIR FLOW	94.2 CFM

Table 6.3c Heater Fan Motor Specs 208/240

7. General Wiring Diagrams

7.1 Hot Food Wiring 379-60597-00 NEXGEN CNTRL BOARD 379-60597-00 208-240v or 115v 50-60hz next gen control



7.2 Hot Food Wiring Cont. NEXGEN CNTRL BOARD 379-60597-00 208-240v or 115v 50-60hz next gen control

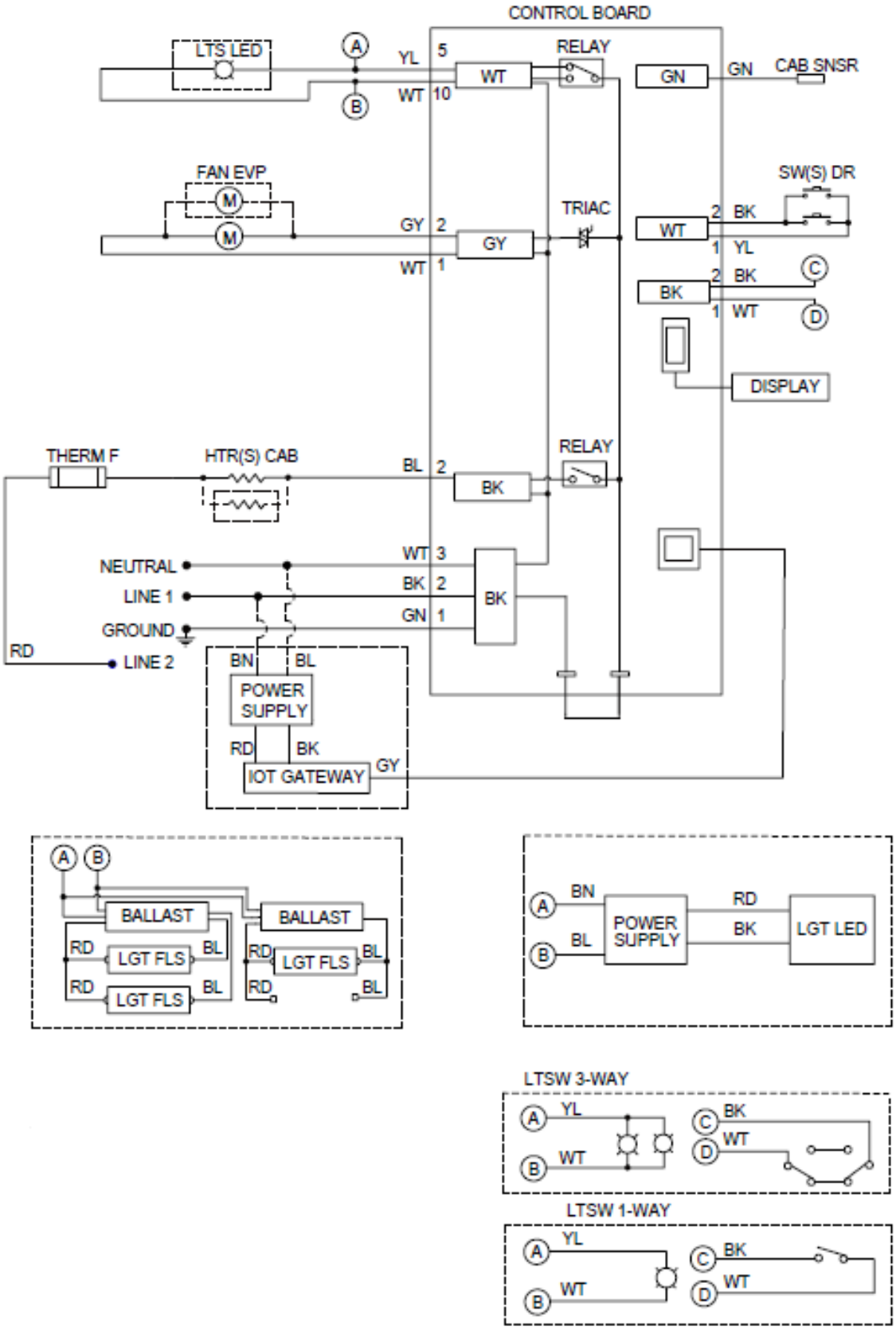
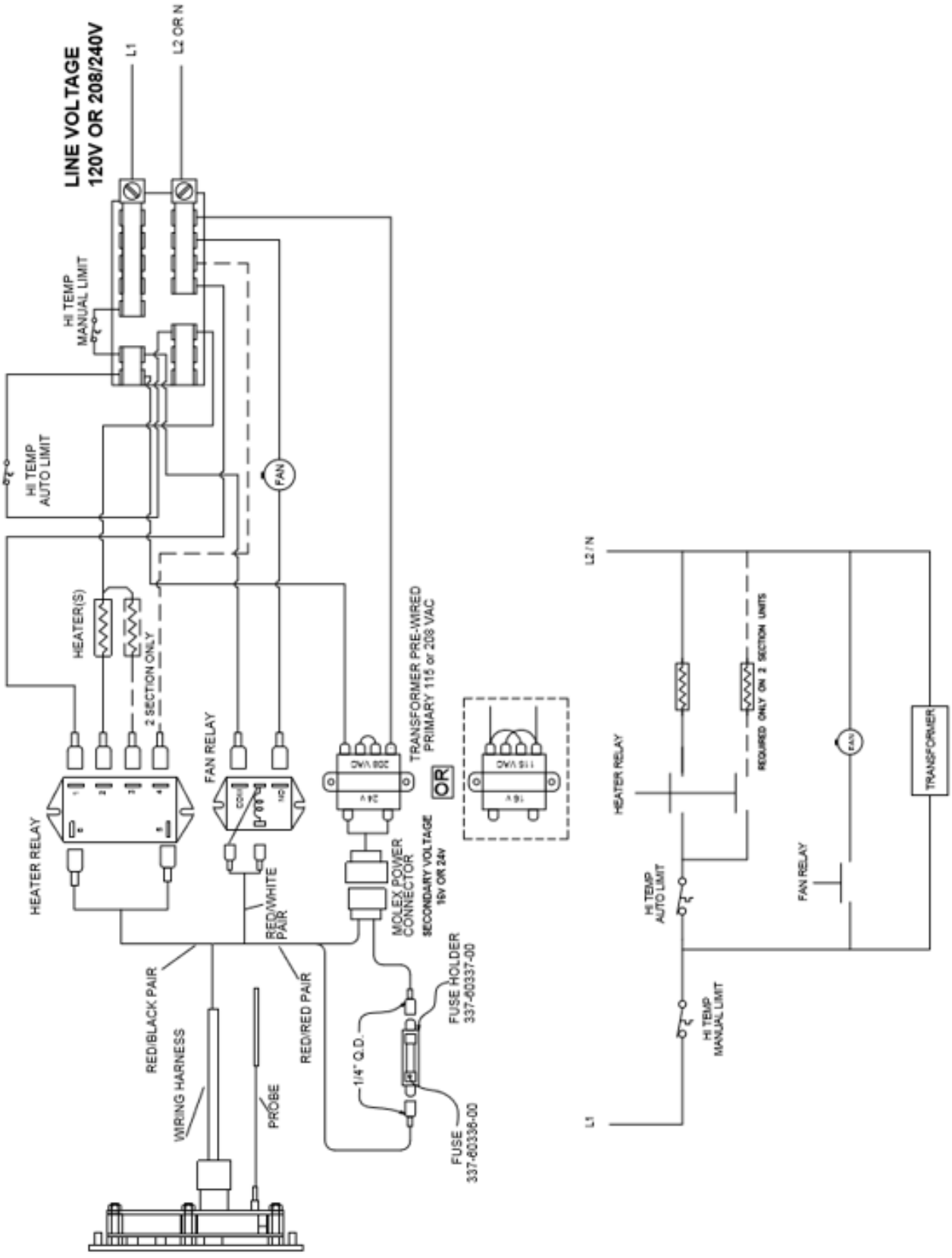


Fig. 7.2 Hot Food Wiring Diagram

7.3 Hot Food Wiring Intela-Traul



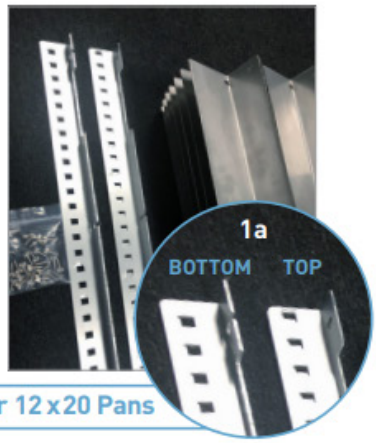
TRAYSLIDES: G-SERIES 1-SECTION HEATED CABINET

Parts	Universals		#1 Trayslides		#4 Trayslides	
Kit Model	G1ACC-TK4		G1ACC-TK1		G1ACC-TK2	
	Model #	QTY	Model #	QTY	Model #	QTY
Pilasters: Front Left, Back Right	342-60031-00	2	342-60032-00	2	342-60032-00	2
Pilasters: Front Right, Back Left	342-60033-00	2	342-60034-00	2	342-60034-00	2
Thumb Screws	351-15822-01	24	351-15822-01	24	351-15822-01	24
Trayslide Inserts	701-60039-00	14	701-60032-00	16	340-04842-00	4

RECOMMENDED TOOLS:

Flathead Screwdriver, Rubber Mallet and Phillips Head Screwdriver (Optional).

INSTALL UNIVERSALS



Bottom Support 18x26 or 12x20 Pans

KIT: G1ACC-TK4 | **TRAYSLIDE PART:** 701-60039-00

1. (Fig. 1a) Identify the top side of each Pilaster.

- The top should have the smaller gap from end to first cut out.

2. Remove the factory installed shelves, pins, and pilasters.

3. (Fig. 3a-3b) Install the back left and front right Pilasters with 6 thumb screws each.

- Hand tighten the thumb screws, check that the Pilasters are parallel with the sides of the cabinet, and then tighten down with a flathead screwdriver.
- If you cannot get to the screws with a screwdriver you will need to remove the heating element on the side of the cabinet with a Phillips Head screwdriver to tighten the thumb screws.

4. Repeat step 2 with the back right and front left Pilasters.

- If the heating element was removed, re-install the heating element back into its original position before installing the Trayslides.

5. (Fig. 5a-5b) Begin installing the Trayslides on one side from bottom to top.

- Insert the bottom set of tabs into the slots at desired height.
- On one side, insert the top tab into the Pilaster slot, and tap the top of the Trayslide near that Pilaster with a rubber mallet.
- Repeat on the other side of the Trayslide while being careful not to unseat the side that was installed first.
- Once both ends are seated in the Pilaster slots, tap the top of the Trayslide with a rubber mallet near both Pilasters to secure it.

6. Repeat step 5 on the other side of the cabinet.

- Be sure to check that the Trayslides match up with the ones installed on the other side.

7. Test on the top set, middle set, and bottom set of Trayslides to make sure that the Pilasters and Trayslides have been installed level.

INSTALL #1 TRAYSLIDES

Bottom Support of 18x26 Sheet Pans

KIT: G1ACC-TK1 | **TRAYSLIDE PART:** 701-60032-00

1. (Fig. 1a) Identify the top side of each Pilaster.
- The top should have the smaller gap from end to first cut out.

2. Remove the factory installed shelves, pins, and pilasters.

3. (Fig. 3a-3b) Install the back left and front right Pilasters with 6 thumb screws each.
- Hand tighten the thumb screws, check that the Pilasters are parallel with the sides of the cabinet, and then tighten down with a flathead screwdriver.
- If you cannot get to the screws with a screwdriver you will need to remove the heating element on the side of the cabinet with a Phillips Head screwdriver to tighten the thumb screws.

4. Repeat step 2 with the back right and front left Pilasters.
- If the heating element was removed, re-install the heating element back into its original position before installing the Trayslides.

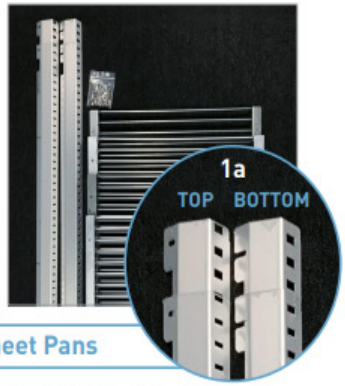
5. (Fig. 5a-5b) Begin installing the Trayslides on one side from bottom to top.
- Insert the bottom set of tabs into the slots at desired height.
- On one side, insert the top tab into the Pilaster slot, and tap the top of the Trayslide near that Pilaster with a rubber mallet.
- Repeat on the other side of the Trayslide while being careful not to unseat the side that was installed first.
- Once both ends are seated in the Pilaster slots, tap the top of the Trayslide with a rubber mallet near both Pilasters to secure it.

6. Repeat step 5 on the other side of the cabinet.
- Be sure to check that the Trayslides match up with the ones installed on the other side.

7. Test on the top set, middle set, and bottom set of Trayslides to make sure that the Pilasters and Trayslides have been installed level.

CLICK HERE TO WATCH #1 HOW-TO VIDEO

INSTALL #4 TRAYSLIDES



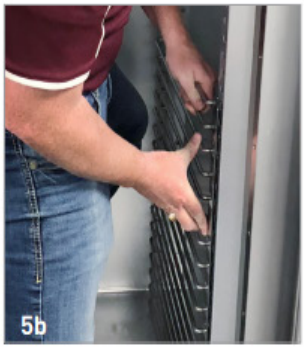
Lip Support of 18x26 Sheet Pans

KIT: G1ACC-TK2 | **TRAYSLIDE PART:** 340-04842-00

1. (Fig. 1a) Identify the top side of each Pilaster.
- The top should have the smaller gap from end to first cut out.

2. Remove the factory installed shelves, pins, and pilasters.

3. (Fig. 3a-3b) Install the back left and front right Pilasters with 6 thumb screws each.
- Hand tighten the thumb screws, check that the Pilasters are parallel with the sides of the cabinet, and then tighten down with a flathead screwdriver.
- If you cannot get to the screws with a screwdriver you will need to remove the heating element on the side of the cabinet with a Phillips Head screwdriver to tighten the thumb screws.



4. Repeat step 2 with the back right and front left Pilasters.
- If the heating element was removed, re-install the heating element back into its original position before installing the Trayslides.

5. (Fig. 5a-5b) Begin installing the Trayslides on one side from bottom to top.
- Insert the bottom set of tabs into the slots at desired height.
- On one side, insert the top tab into the Pilaster slot, and tap the top of the Trayslide near that Pilaster with a rubber mallet.
- Repeat on the other side of the Trayslide while being careful not to unseat the side that was installed first.
- Once both ends are seated in the Pilaster slots, tap the top of the Trayslide with a rubber mallet near both Pilasters to secure it.

6. Repeat step 5 on the other side of the cabinet.
- Be sure to check that the Trayslides match up with the ones installed on the other side.

7. Test on the top set, middle set, and bottom set of Trayslides to make sure that the Pilasters and Trayslides have been installed level.

TRAYSLIDES: G-SERIES 2-SECTION HEATED CABINET

TRAYSLIDE PART: 701-60039-00
QTY: 14 UNIVERSAL TRAYSLIDES

RECOMMENDED TOOLS: Rubber Mallet

INSTALL UNIVERSAL TRAYSLIDES

Bottom Support 18x26 or 12x20 Pans

1. First remove the shelves and clips from the pilasters that are shipped with the unit. The Universal Trayslides will be installed on the original Pilasters.

2. (Fig. 2a-2b) Begin installing the Trayslides on one side from bottom to top.

- Insert the bottom set of tabs into the slots at desired height.
- On one side, insert the top tab into the Pilaster slot, and tap the top of the Trayslide near that Pilaster with a rubber mallet.
- Repeat on the other side of the Trayslide while being careful not to unseat the side that was installed first.
- Once both ends are seated in the Pilaster slots, tap the top of the Trayslide with a rubber mallet near both Pilasters to secure it.

3. Repeat step 1 on the other side of the cabinet.

- Be sure to check that the Trayslides match up with the ones installed on the other side.

3. Test on the top set, middle set, and bottom set of Trayslides to make sure that the Trayslides have been installed level.

***NOTE:** 2 Sets of Trayslides are needed to equip both sections on 2-Section Models.*

8. Warranty Information

NOTES STANDARD DOMESTIC WARRANTY

TRAULSEN & CO., INC. Warrants new equipment to the original purchaser, when installed within the United States against defective material and workmanship for one (1) year from the date of original installation. Under this warranty, TRAULSEN & CO., INC. Will repair or replace, at its option, including service and labor, all parts found to be defective and subject to this warranty. The compressor part is warranted for an additional four (4) years. During this period TRAULSEN & CO., INC. Will supply replacement compressor(s) if deemed defective, however, all installation, recharging and repair costs will remain the responsibility of the owner.

This warranty does not apply to damage resulting from fire, water, burglary, accident, abuse, misuse, transit, acts of God, attempted repairs, improper installation by unauthorized persons, and will not apply to food loss.

THERE ARE NO ORAL, STATUTORY OR IMPLIED WARRANTIES APPLICABLE TO TRAULSEN, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. TRAULSEN SHALL HAVE NO OBLIGATION OR LIABILITY FOR CONSEQUENTIAL OR SPECIAL DAMAGES, GROWING OUT OF OR WITH RESPECT TO THE EQUIPMENT OR ITS SALE, OPERATION OR USE, AND TRAULSEN NEITHER ASSUMES NOR AUTHORIZES ANYONE ELSE TO ASSUME FOR IT ANY OBLIGATION OR LIABILITY IN CONNECTION WITH THE EQUIPMENT OR ITS SALE, OPERATION OR USE OTHER THAN AS STATED HEREIN.

INTERNATIONAL COMMERCIAL WARRANTY

(for Canadian warranties see domestic US warranty)

TRAULSEN & CO., INC. Warrants to the original purchaser the Refrigeration Equipment manufactured and sold by it to be free from defects in material and workmanship under normal use and service for a period of one 1) year from date of shipment. Under this warranty, TRAULSEN & CO., INC. Will reimburse the purchaser for the replacement of any part of said equipment (excluding dryers & refrigerant gas) which then proves to be defective. This warranty is void if said equipment or any part thereof has been subject to misuse, damage in transit, accident, negligence or alteration.

TRAULSEN'S standard warranty does not apply to Export Sales. Rather, for a period of one (1 year from date of original installation not to exceed Fifteen months from date of shipment from factory, TRAULSEN:

will replace, F.O.B. factory, any defective parts normally subject to warranty.

will not cover the cost of packing, freight or labor such costs being the sole responsibility of the dealer.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED AND CONSTITUTES TRAULSEN'S FULL OBLIGATION AND LIABILITY. WARRANTIES NOT AVAILABLE ON REMOTE MODELS.

NOTES:

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Form Number: TR00399 | Revision Date: 10-2025

Hours of Operation: Monday - Friday 7:30 a.m. - 4:30 p.m. (CST)