



INLINE 4000S



Heated Cabinets Square Format



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INTRODUCTION

Welcome

HEATED CABINETS - INTRODUCTION

Future Products Group (FPG)

Welcome to the world of FPG! Our products are designed and engineered to give you the optimal performance that you deserve with innovative visual merchandising appeal.

We are confident that you will be delighted with your state of the art inline food service cabinet, and that it will become a valued appliance in your store.

Guidance and Help

Any new appliance can seem very complex and confusing at first glance. To ensure you receive the utmost benefit from your new inline cabinet, there are two things you can do.

- Before operating the cabinet, please read the instruction book carefully and follow its recommendations. The time taken will be well spent. These instructions both general and technical tell you how to install, operate and look after your inline food service cabinet so that you can receive the full benefits that this cabinet has to offer.
- These instructions cannot, however, cover all eventualities. If you are
 unsure of any aspect of the installation, instructions or performance of your
 cabinet, contact your dealer promptly or contact us via email to
 support@fpgworld.com.

Warranty

HEATED CABINETS - INTRODUCTION

Warranty Period

Future Products Group Limited warrants, to the original purchaser of an FPG manufactured food service cabinet that for ONE YEAR (12 months), from the date of purchase, any defect in workmanship or material resulting in the product malfunctioning while under correct use will be rectified.

Liability under this warranty is limited to replacing or repairing a part, without charge.

Continued on next page



Warranty cont.

HEATED CABINETS - INTRODUCTION

Liability **Exceptions**

Liability under this warranty does not include:

- Any loss, or damage or expenses directly or indirectly arising from use or inability to use the product or from any other cause.
- Any part of the cabinet which has been subject to misuse, neglect, alteration, incorrect installation, accident, or damage caused by transportation, use of abrasive or caustic chemicals, flooding, fire or acts of God.
- Any damage or malfunction resulting from the use of non-FPG supplied spare parts.

Specific Exclusions

The following are specifically excluded from warranty:

- Breakage of glass or plastic components or the replacement of LED lighting strips or gaskets.
- Failure to re-assemble the cabinet correctly after cleaning.
- Fair wear and tear.

Assessment

The liability under this warranty is dependent on an assessment by FPG, to determine the defect in workmanship or materials.

Time Limit

FPG does not guarantee that any service to be performed under this warranty will be carried out within any particular time limit.

Caution

No warranty claim will be accepted unless authorised by FPG prior to commencement of service.



OPERATION

Cabinet Layout

HEATED CABINETS - OPERATION

4000 Series Cabinets

The 4000 Series cabinets are available with either fixed glass or sliding glass front doors, and sliding glass rear doors.

The series includes Ambient, Heated and Refrigerated models.

The cabinet lighting and temperature controls are on the back of the cabinet.



Lighting

All cabinets are fitted with high efficiency LED lighting strips in the ceiling of the cabinet and below each shelf as standard.



Controls

HEATED CABINETS - OPERATION

Switches



The control panel is located at the top of the cabinet back.

Rocker switches control the power supply and lights.

Heating Controller



The cabinet will heat up when the main switch is turned on, the temperature being regulated by the electronic controller.

The set temperature can be changed by holding down the left button, and pressing the up or down

key as required. A temperature of 75°C is the recommended setting to maintain food temperature within food safety guidelines.

The display normally shows the actual cabinet temperature.

NOTE Setting a higher temperature than required will not speed up the heating process. **Set it to the desired temperature.**



Preparation

HEATED CABINETS - OPERATION

Shelf Location and Ticketing



All shelves are adjustable in height and can easily be moved up or down, to match product size. The movement is restricted to 50mm, because of the electric cables to the lights. For greater movement contact the manufacturer or supplier for advice, as electrical modifications may be required.

The front and rear edges of the shelves are profiled to carry ticketing/labels.

Shelf Adjustment

To move the shelf brackets, first remove the sliding doors and the shelf trays.

Using two people, one on each bracket, lift the brackets straight up firmly and then pull the brackets forward, to disengage them from the slots in the support

posts.

Insert the brackets into their new position, and push bracket down firmly.

The brackets may be positioned to give two different degrees of slope to the shelves.

Refit all shelf trays and doors.

N.B. Make sure brackets are pushed down as far as they can go. Failure to do this may result in shelf collapse, when loaded with product.

Power Supply

Ensure that power is connected to the cabinet.

Fumes and Odours

Before use, operate the cabinet for 4 hours to remove any fumes or odours, which may be present. This will avoid possible tainting of food.

Continued on next page



Preparation cont.

HEATED CABINETS - OPERATION

Load Cabinet

Load the cabinet with **pre-heated** product.

The cabinet is designed to maintain the temperature of pre-heated product above 65°C.

It is not an oven, and consequently, if cold product is introduced, there could be a considerable delay before the operating temperature rises to the normal operating level.

WARNING: Aluminium Foil

Do NOT place aluminium foil on the base trays. This will disrupt the convection circulation of air, and cause uneven heating.

Blockage of air vents may cause severe overheating of the cabinet base.



Close all Doors

It is important to keep all cabinet doors closed. If doors are not fully closed, an even temperature will not be maintained within the cabinet.

Turn on Lights

When ready for service, turn on the cabinet lights.

Door Opening

The cabinet is designed to maintain food at a temperature above 65°C. The heating system is designed to maintain this temperature with the doors being opened and closed up to sixty times per hour.

If the doors are left open for an extended period the temperature will fall. Once the doors are closed the temperature will take some time to rise to the normal operating level. The longer the doors are open the longer the time to restore normal operating temperature.



TROUBLE SHOOTING

FAULT	POSSIBLE CAUSE	REMEDY	
	Door not in track	Install door correctly in track	
Doors are not sliding smoothly	Debris in track	Clean door tracks (see cleaning)	
J ,	Lack of lubricant	Apply food grade lubricant to door track	
	The mains isolating switch on the wall, circuit breaker or fuses are off at the power board	Turn isolating switch circuit breaker or fuses on	
Cabinet does not operate/start	The thermostat is in the OFF position	Turn control knob to desired temperature	
	Internal fuse blown	Have wiring checked and replace fuse (5A Slow Blow)	
	One or more doors is open	Close doors and re-test temperature after thirty minutes	
Cabinet does not reach temperature	Thermostat setting disturbed	Re-set thermostat and re-test after thirty minutes	
	Thermostat is faulty	Have thermostat replaced	
	An element is blown	Have the element replaced	
	The light switch is OFF	Turn light switch ON	
Cabinet lights not working	A failed LED power supply	Replace the power supply	
	An LED strip has failed	Replace the LED assembly	
	Internal fuse blown	Have wiring checked and replace fuse (5A Slow Blow)	
Aluminium parts corroded	Caustic detergent damage	Order replacement parts	

Service Personnel Only

The table entries in *italics* indicate actions to be taken only by qualified Service Personnel.



CLEANING

Cautions

HEATED CABINETS - CLEANING

Power

ALWAYS TURN THE POWER SUPPLY OFF BEFORE CLEANING.

Water

THIS UNIT IS NOT WATERPROOF. DO NOT USE A WATER JET SPRAY TO CLEAN THE INTERIOR OR EXTERIOR OF THIS CABINET.

Exterior

HEATED CABINETS - CLEANING

Metal Surfaces

Stainless steel or aluminium surfaces should be cleaned with hot soapy water or a good quality metal cleaning compound. DO NOT clean surfaces with abrasive pads or cleaners (e.g. Scotchbrite pads or Jif), as paint, stainless steel and aluminium surfaces will be damaged.

Glass

All glass should be cleaned using a good quality glass cleaner and a clean cloth.

DO NOT use abrasive pads or cleaners, because they will damage the surface of the glass.

Sliding Doors



Sliding glass doors are located by plastic guides at the top and bottom.

The doors can be removed for cleaning by sliding the door to central position, placing hands either side of the door, lifting it up and then swinging it out at the bottom.

When replacing doors, make sure that they are located in the correct slots, top and bottom. The left door should be in the inner slots, and the right door in the outer slots.

Sliding door tracks should be vacuumed out regularly to keep doors sliding freely.

Continued on next page



Interior

HEATED CABINETS - CLEANING

Cabinet Well



To clean the hot cabinet well, first lift out the deck trays and dividers and then sweep out or vacuum away loose debris.



This cabinet is a dry well unit, so the well is not waterproof. Do NOT pour water into the well as it will leak out and damage insulation and electrical wiring.

Trays, Shelves & Air Grills

Stainless steel trays, shelves, grills etc. should be cleaned with hot soapy water. Do not use abrasive pads or cleaners (e.g. Scotchbrite pads or Jif), as these may damage surfaces.

Warning: Dishwasher detergents will damage any anodised aluminium parts.

Routines

HEATED CABINETS - CLEANING

To maintain optimum performance, cleaning schedules must be regular and thorough.

Inspection

Schedules

As part of the cleaning routine, the controls, mechanical parts and electrical wiring should be inspected for damage, deterioration or need of adjustment.

Correction

If any small faults are found, have them attended to promptly by a competent serviceman. Don't wait until they cause a complete breakdown.



INSTALLATION

Regulations

HEATED CABINETS - INSTALLATION

Compliance with Local Requirements

It is very important that your inline food cabinet is installed correctly and that the operation is correct before use. Installation must comply with local electrical, health & safety and hygiene requirements.

Setting Up

HEATED CABINETS - INSTALLATION

Unpacking

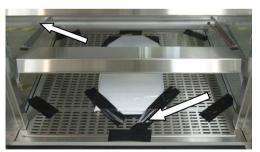
Unpack and check unit for damage and report any damage to the carrier and supplier. Report any deficiencies to your supplier.

The cabinet is supplied fully assembled, but the shelf trays are packed separately.

Site Preparation

Ensure the cabinet location and any bench cut outs are made to the precise measurements shown in the Mechanical Drawings. Position the cabinet in its allocated working position. Use a spirit level to ensure the cabinet is level from side to side and front to back. (If this is not carried out, uneven temperature distribution could occur).

Cabinet Preparation



Remove all tapes, ties and packers, used to prevent movement during transit.

Lift out the deck trays, grills and divider bars, to gain access to the cabinet well.

Check that all plastic film protection has been removed from surfaces; otherwise it will melt when the cabinet heats up.

Re-assemble the trays and shelves.

Shelf Trays

Remove the shelf trays from their packing, peel off the protective plastic coating and assemble them on the support members.

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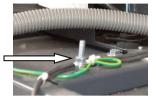
Setting Up cont.

HEATED CABINETS - INSTALLATION

Grounding WARNING: THIS APPLIANCE MUST BE GROUNDED TO EARTH

The grounding lead, in the mains cable, must always be connected to ground.

Terminals are also provided, to allow the cabinet to be bonded to a surge grounding conductor or to adjacent equipment.



Power Supply

Before connecting to the power supply, check that the local supply is correct to that shown on the rating plate, located on the rear of the cabinet.

Isolation

If the cabinet is not connected by a plug and socket, but is hard wired to the mains supply, a means of isolation must be provided.

If a plug and socket are used, they should still be accessible after the cabinet is installed.

Location

Ventilation

HEATED CABINETS - INSTALLATION

The heated cabinet is designed to meet the HACCP specification with free room air circulation.

Access

Access to the back of the cabinet is required for loading, cleaning, re-positioning of shelves and operation of the control panel.

Fumes and Odours

Before use, operate the cabinet for 4 hours at 90°C, to remove any fumes or odours, which may be present. Open the doors periodically during this period, to allow a change of air. This will avoid possible tainting of food.



SERVICING

Control Gear

HEATED CABINETS - SERVICING

Location

The electrical control gear is located in the top of the cabinet.

Remove the top plate to access



the switches, LED power supplies, electronic temperature controller and fuse.

Lighting

HEATED CABINETS - SERVICING

Caution

Do <u>not</u> service lights without isolating the cabinet from the mains supply.

Test Lighting Components

Before replacing an LED strip, check that the power supply is working.

If there is no dc voltage at the output, the power supply should be replaced.

If there is a dc output, the LED strip must be replaced.

Access to LED Strips

The LED strips are protected with plastic covers. These clip into grooves in the aluminium extrusion.

Remove the plastic cover to access the LED strip.

The top light assembly is similar to the shelf lights, but the correct replacement unit must be used.



LED Strip Replacement

Individual LED modules cannot be replaced. A complete light unit must be used.

Connection is made with a plug and socket. Disconnect the supply lead from the faulty unit, and reconnect it to the replacement unit.

Replace the plastic cover.





Heating

HEATED CABINETS - SERVICING

Caution

DO NOT attempt to replace heating elements without isolating the cabinet at the supply switch or by unplugging it from the mains supply.

Element Replacement

Remove all base trays and dividers from inside the cabinet, to reveal the heating elements.

CAUTION:

This must only be carried out by a qualified service person. To access the element terminals, remove the screws securing the element to the rear bulkhead. Unclip the element from its support brackets and withdraw it to reveal the connections.



Disconnect the old element, connect the replacement, taking care to replace and refit any insulation material. Position the new element against the bulkhead, clip it into the support brackets and replace the two fixing screws.

Test

Turn the power on and test the heater operation. If normal operation cannot be restored, by replacing the element, other circuit elements will have to be checked, see Fault Finding.

Caution

Do not run the cabinet heaters for extended periods, without the base trays and divider bars in position. Directly radiated heat may otherwise damage the lower light fittings.

Re-assemble

If the heater is now working, re-assemble the base trays and dividers inside the cabinet.



Door Seals

HEATED CABINETS - SERVICING

Seal Replacement

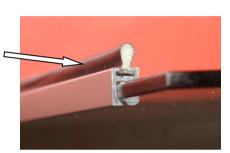
The doors should be removed to allow the old seals to be removed and the new ones fitted. See the Cleaning section for details.

Sliding Doors

Each sliding door has a seal between the door and the cabinet end panel. The seal slides into a groove in the door extrusion, and can be withdrawn and replaced, if damaged.



A centre seal is fitted between the inner and outer doors. The Qlon seal is located in a slot in the aluminium extrusion, and can be replaced if damaged.



Mains Lead

HEATED CABINETS - SERVICING

Lead Replacement

If damaged, the mains lead must ONLY be replaced by a qualified service person.



SPECIFICATIONS

Mechanical

HEATED CABINETS - SPECIFICATIONS

	CABINET MODEL		
	IN 4H08S	IN 4H12S	IN 4H15S
Height	1405 mm	1405 mm	1405 mm
Width	803 mm	1203 mm	1503 mm
Depth (curved / square)	774 / 778 mm	774 / 778 mm	774 / 778 mm
Weight (curved / square)	107 / 135 kg	140 / 170 kg	170 / 206 kg
Cabinet Well Material	Stainless steel	Stainless steel	Stainless steel
Cabinet Colour	Grey and natural anodised aluminium.	Grey and natural anodised aluminium.	Grey and natural anodised aluminium.
Top Lighting	Standard	Standard	Standard
Shelf Lighting	Standard	Standard	Standard
Glass Type (front/back)	Single glazed	Single glazed	Single glazed
Glass Type (ends)	Double glazed	Double glazed	Double glazed
Front Doors	Sliding or Fixed options	Sliding or Fixed options	Sliding or Fixed options
Number of Shelves	Three plus base	Three plus base	Three plus base
Shelf Display Area (curved / square)	0.8 m ² / 1.0 m ² plus base 0.4 m ²	1.2 m ² / 1.5 m ² plus base 0.6 m ²	1.6 m ² / 2.0 m ² plus base 0.8 m ²
Climatic Class & IP	Cabinets are tested under Climate Class 2 conditions and have IP 20 ratings		

Electrical

HEATED CABINETS - SPECIFICATIONS

	CABINET MODEL		
	IN 4H08S	IN 4H12S	IN 4H15S
Voltage	220 - 240 V 50 Hz 1φ	220 - 240 V 50 Hz 1ф	220 - 240 V 50 Hz 1ф
Power	1.5 kW	1.6 kW	3.1 kW
Current	6.6 A	7.1 A	13.3 A
Connection	3 pin plug, 10 A lead	3 pin plug, 10 A lead	3 pin plug, 15 A lead
HACCP Temp. Range	65° - 80° C	65° - 80° C	65° - 80° C
Max. Temp. Range	30° - 90° C	30° - 90° C	30° - 90° C
Lighting	4 x LED strips	4 x LED strips	4 x LED strips



Compliance

HEATED CABINETS - SPECIFICATIONS

Standards

FPG heated food display cabinets are designed to meet and exceed:

- International safety standards for electrical heated appliances: IEC 60335-1, IEC 60335-2-49, IEC 60335-2-50 and the equivalent country-specific standards including AS/NZS and BS EN.
- International standards for electromagnetic compatibility/emissions: CISPR 14-1, and the equivalent county-specific standards including AS/NZS CISPR and BS EN 55014-1.
- Essential safety requirements: AS/NZS 3820 and AS/NZS 4417

Please contact FPG to discuss your requirements for meeting country-specific standards.

Operational Safety

This appliance is not intended for use by young children or infirm persons, unless they have been adequately supervised by a responsible person, to ensure that they can use the appliance safely.

Young children should be supervised, to ensure that they do not play with the appliance.

Performance Aspects

The cabinet is HACCP compliant, with the following performance:

Cabinet Operating Temperature	Test Conditions
>65°C	22°C Ambient with 65% RH

Improvements

HEATED CABINETS - SPECIFICATIONS

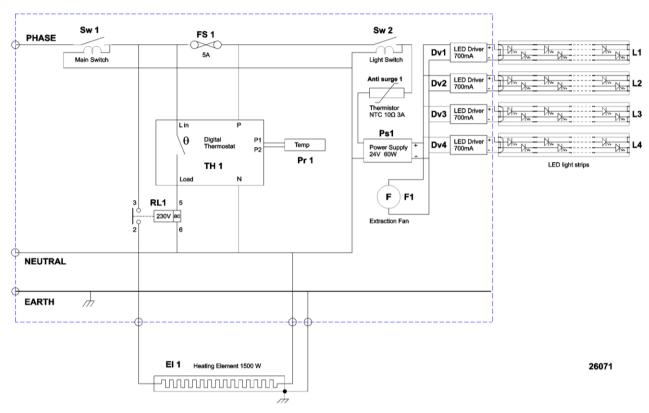
Ongoing Development

FPG reserves the right to change specifications and construction, as part of ongoing product improvement.

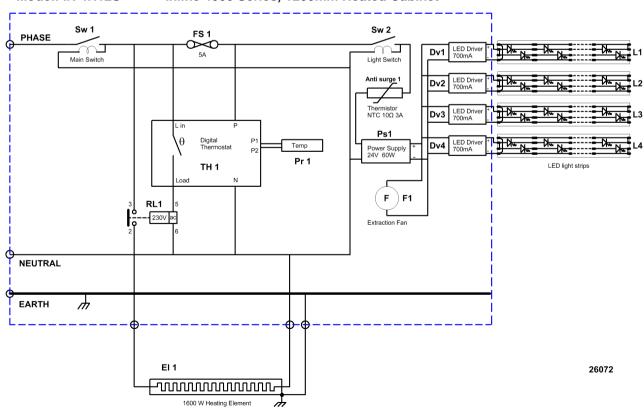


ELECTRICAL CIRCUIT DIAGRAMS

Model: IN 4H08S Inline 4000 Series, 800mm Heated Cabinet



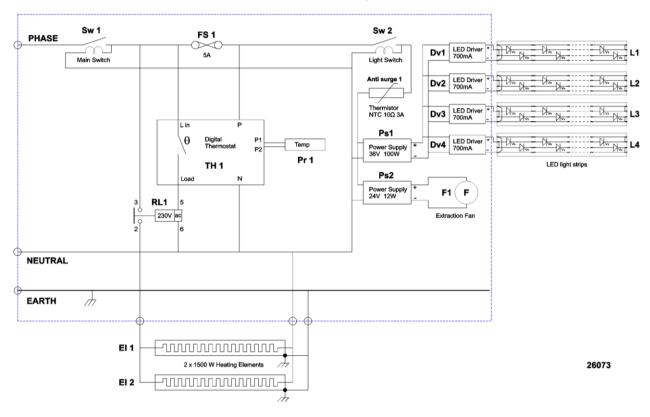
Model: IN 4H12S Inline 4000 Series, 1200mm Heated Cabinet





ELECTRICAL CIRCUIT DIAGRAMS, Continued

Model: IN 4H15S Inline 4000 Series, 1500mm Heated Cabinet





SPARE PARTS

Cabinet Serial Number

When ordering spare parts, it is important to quote the Serial Number printed on the label fixed to the control panel.

This serial number will enable FPG to trace details of the build specification of your particular cabinet, and hence ensure that spare parts are fully compatible.

To satisfy warranty conditions, and ensure optimum performance, use only FPG supplied spare parts.

Part Description	FPG Part No.
Switch DPST 16A 250V 150A High Inrush Green Rocker	17287
Digital Thermostat LAE LTR-5CSRE 230V 16A	21619
Probe 3m for LAE LTR-5CSRE Thermostat	21620
Fuse Link (5A, 250V, Slow Blow)	13330
24V 60W LED power supply	21613
36V 100W LED power supply	25922
24V 12W Fan power supply	25184
LED Driver 700mA	25762
Ant-surge Thermistor 10 Ohm 3A	22354
Polycarbonate Light Cover 1120mm	18113
Polycarbonate Light Cover 720mm	18114
Top Light Replacement Kit for 4H08	69871
Shelf Light Replacement Kit for 4H08	69839
Top Light Replacement Kit for 4H12	69858
Shelf Light Replacement Kit for 4H12	69869
Top Light Replacement Kit for 4H15	69863
Shelf Light Replacement Kit for 4H15	69424
Extraction Fan BLDC 60mm 24V dc	23282
Heating Element 1500W 230V (800 / 1500 cabinets)	25917
Heating Element 1600W 230V (1200 cabinets only)	18683
Heating Element Relay	16824
Qlon centre door seal	13677
Slide-in rubber door seal	11424



SPARE PARTS Continued

Location of Glass Parts

In the following table, handed glass parts are labelled as viewed from the REAR of the cabinet.

Part Description	FPG Part No.
4K Square Glass End Panel LH-RH	21234
4K Square Glass Top DG 800	21249
4K Square Glass Top DG 1200	21250
4K Square Glass Top DG 1500	21251
4K 800 Heated SG Front Square Flat Inner Slider Door	72633
4K 800 Heated SG Front Square Flat Outer Slider Door	72634
4K 1200 Heated Front Square SG Flat Inner Slider Door	73620
4K 1200 Heated Front Square SG Flat Outer Slider Door	73621
4K 1500 Heated Front Square SG Flat Inner Slider Door	73608
4K 1500 Heated Front Square SG Flat Outer Slider Door	73609
4K 800 Heated SG Square Fixed Front Glass	18879
4K 1200 Heated SG Square Fixed Front Glass	21571
4K 1500 Heated SG Square Fixed Front Glass	21572
Product Manual for Inline 4000 Square Series Heated Cabinets	21666

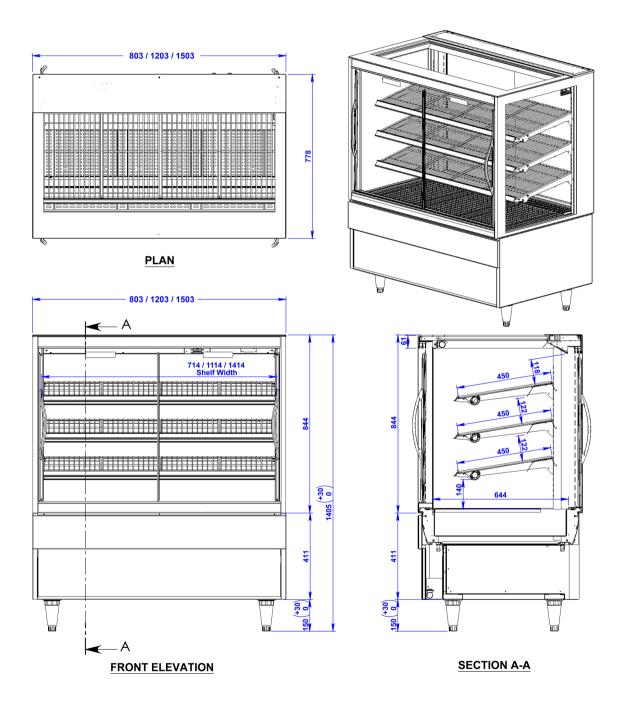


MECHANICAL DRAWINGS

Dimensions

HEATED CABINETS - MECHANICAL DRAWINGS

IN-4H08S/12S/15S Square - Sliding front doors

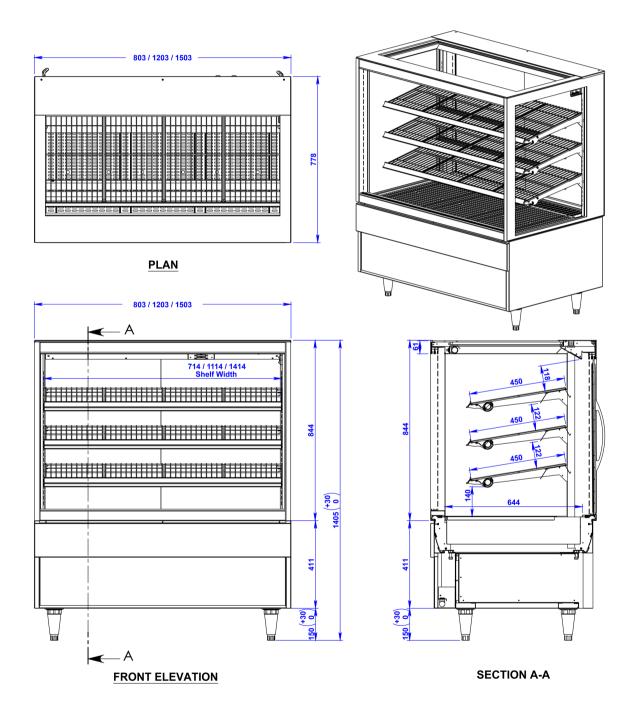




Dimensions cont.

HEATED CABINETS - MECHANICAL DRAWINGS

IN-4H08S/12S/15S Square - Fixed front glass





For full contact details please visit the Contacts page on **FPGWORLD.COM** or email us at support@fpgworld.com In line with policy to continually develop and improve its products, Future Products Group reserves the right to change specifications and design without notice.

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