SEPTEMBER 1994

FOSTER

PIZZA HUT

DOUGH RETARDER

DOUGH PROVER

RETARDER / PROVER

INSTALLATION AND OPERATING INSTRUCTION MANUAL

Pizza Hut

FOSTER REFRIGERATOR (UK) LTD

CABINET DESCRIPTION

The Pizza processing cabinets are provided in three formats:

1. Model PR - RI - 1T Dough Retarder single section.
2. Model PP - RI - 1T Dough Prover single section.
3. Model PRP - RI - 2T Dough Retarder / Prover two section " Combi".

Each cabinet is designed to accomodate two special pizza trolleys complete with five "slatted" aluminium shelves.
The control system for each cabinet allows simple manual operation with pre-set temperatures and function indication lights.
The cabinets are of modular construction allowing for assembly on site.
The Exterior finish to side and front panels is Stainless Steel.The Internal finish is smooth aluminium to both walls and ceiling. Doors have an Exterior and interior finish of Stainless Steel. The doors are a "slab" type with wiper base gaskets and edge mount hinges.
The cabinets are designed to operate as Retarder and Prover functions with the temperatures as follows:

Retarder + 3°c / + 6°c
Prover + 32°c / +35°c

Each cabinet has an Micro Processor temperature controller complete with function indicator L.E.D.'s. The Prover also has a process timer.
Air distribution of the Retarder is achieved by passing air through the evaporator coil located in the insulated plug, down a rear air duct, discharged at low level allowing it to pass over the product, stored on the trolley, prior to returning via a perforated air grill to the evaporator.
On the Prover, air distribution is the same as the Retarder but passes throug a Heater assembly instead of an evaporator.
The refrigeration system on the Retarder, is a self contained unit comprising of air cooled condensing unit, forced air evaporator and all ancillery parts and controls.
Refrigeration used on the Retarder will be R22. An externally equalized thermostatic expansion valve is used to control the correct amount of refrigerant required to meet the demand of the evaporator.
Heating is achieved by an electric heater assembly mounted on the ceiling panel complete with fan providing adequate air circulation in the Prover section.
Each cabinet will operate from a 220/240 volt, 1 phase,50 Hz electrical supply.On the event of the cabinet overheating, the over temperature neon will illuminate. the heater is automatically switched off. The fans continue to run.
To reset depress the green button on the overheat thermostat on the roof of the cabinet.

DESIGN PARAMETERS

RETARDER

The retarder is designed to reduce the temperature of 30 kg dough products from an entry temperature of + 35°c to +10°c in approximately one hour with a final temperature of + 3 in two hours.

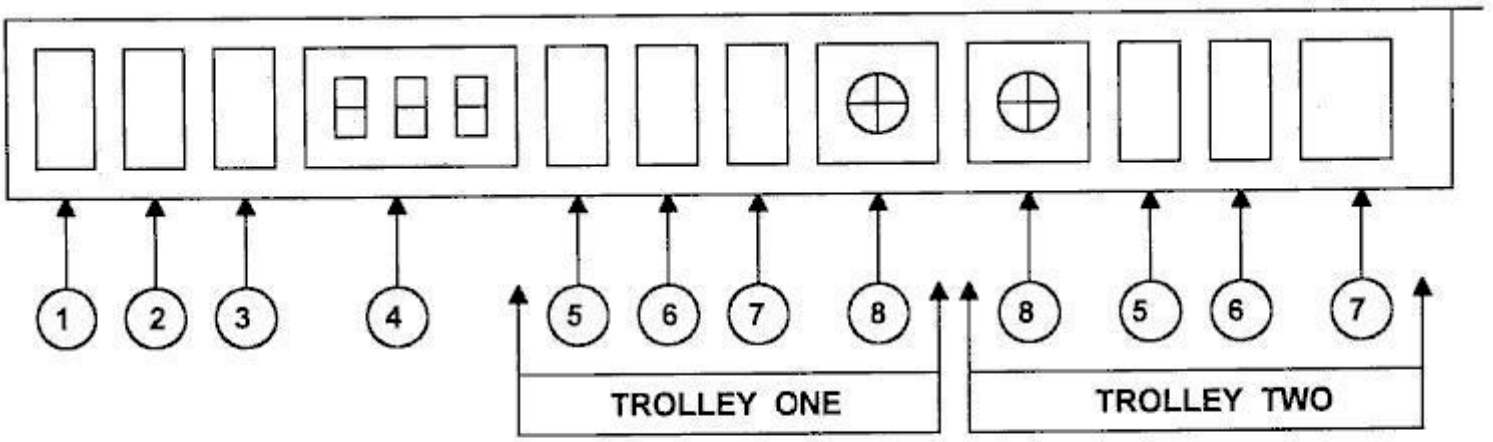
Operating temperature ---------- + 2°c / + 5°c
Ambient temperature ---------- + 43°c maximum
Refrigeration Condensing Unit ---------- 0.75 Hp
Refrigeration capacity ---------- 1100 K / Cal / Hr.
Refrigerant ---------- R22.
Electrical supply ---------- 220 /240 v,1ph, 50 Hz, 13 amp.
Evaporating temperature ---------- - 7°c degrees.

PROVER

The prover is designed to increase the temperature of 30 kg of dough products from ambient temperature to + 35°c in 1½ hours.

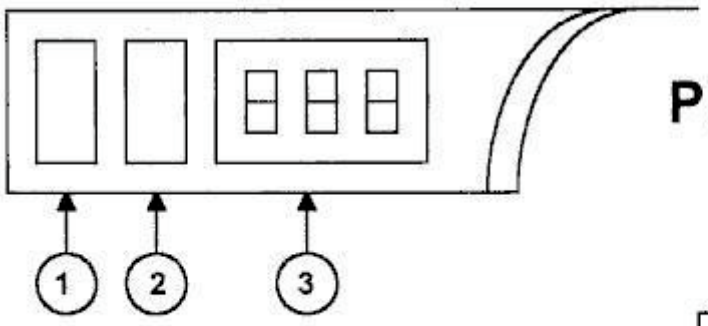
Operating temperature ---------- + 32°c / + 35°c
Heater assembly ---------- 3 kw.
Electric suppy ---------- 220 /240 v,1ph,50 hz. 16 amp.
Process timer ---------- 0 to 30 Hours. (Adjustable)
Overheat safety thermostat ---------- + 50°c.
Heater duct safety thermostat ---------- + 90°c.

FRONT PANEL CONTROLS



PP-RI-1-T CONTROL LAY-OUT DETAILS

1. MAINS ON / OFF SWITCH
2. MAINS ON NEON
3. OVER TEMPERATURE NEON
4. THERMOMETER / THERMOSTAT
5. ALARM CANCEL / PROCESS START SWITCH
6. PROCESS START NEON
7. PROCESS END NEON
8. PROCESS TIMER

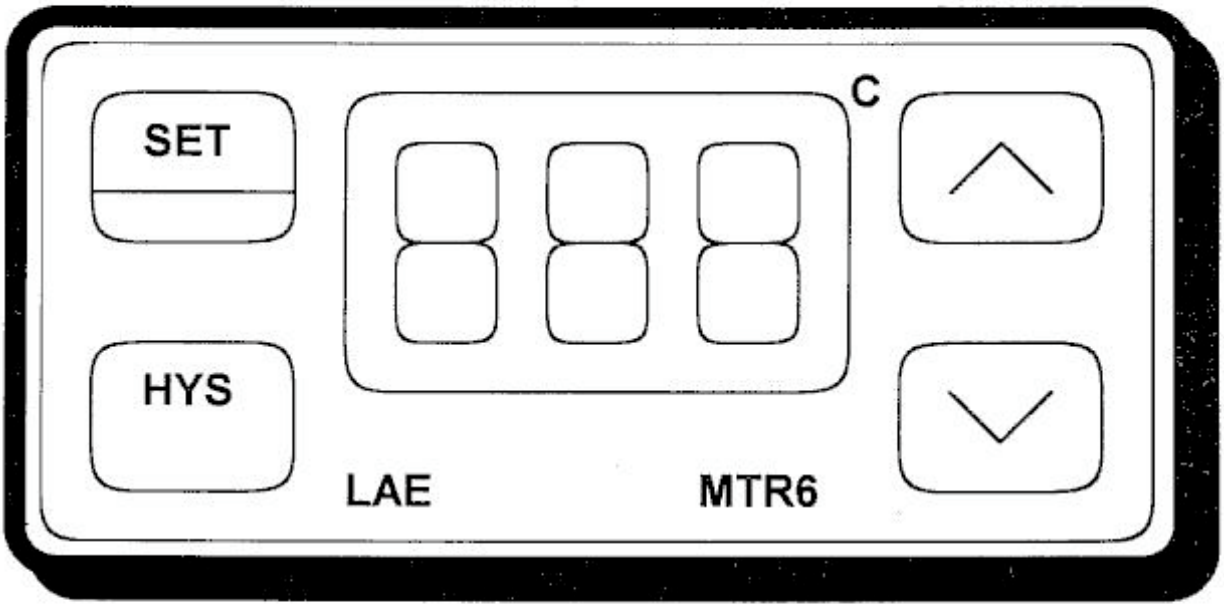


PR-RI-1-T CONTROL LAY-OUT DETAILS

1. MAINS ON / OFF SWITCH
2. MAINS ON NEON
3. THERMOMETER / THERMOSTAT

NOTE :- BOTH OF THESE LAY-OUTS ARE FITTED ON TO THE PRP-RI-2-T

LAE MICRO-PROCESSOR DIGITAL TEMPERATURE CONTROLLER



Retard mode : Switch on by depressing on/off switch, the mains on neon will illuminate. The micro-processor has been pre-set at +2°c. Should it necessary to change the operating temperature press key "SET" on front of micro-processor. L.1 will appear on controller followed by flashing set point (cut out temperature). Set point adjustment should be made whilst digits are flashing. To adjust set point press either the up or down buttons on the right of controller. This desired value can be entered by either pressing the "SET" button or it will enter automatically if left.

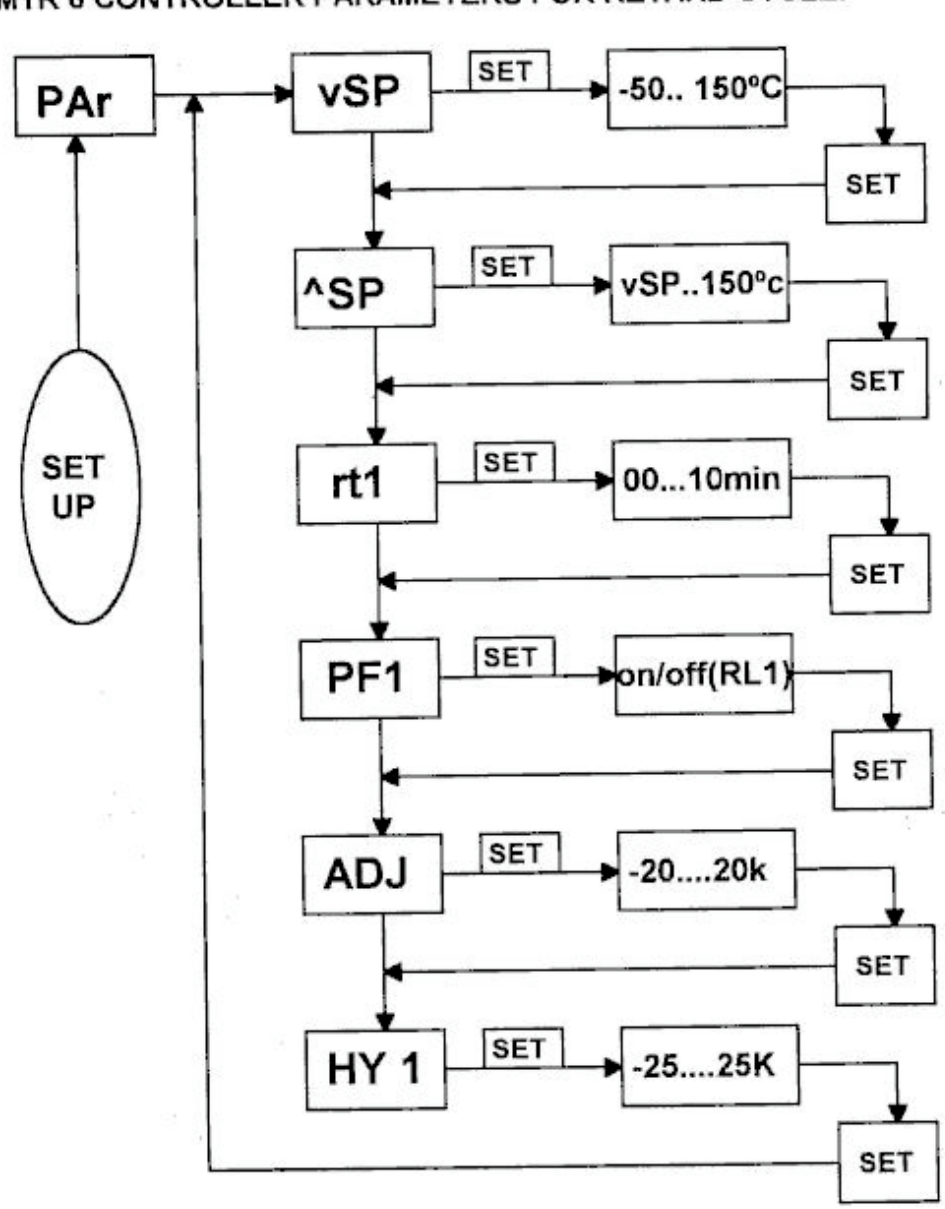
Prove mode : Switch on by depressing the on/off switch, the mains on neon will illuminate. The operating temperature has been pre-set +35°c. Should it be necessary to change the operating temperature than follow the same proceedure as explained in the section above.

NOTE:Two seperate and independent process timers are incorporated on all prover models, one for each trolley. The following proceedure applies on one or both timers where applicable. Ensure that the cabinet is at operating temperature.

Turn the dial to the prove time required. Depress the approriate alarm cancel/process start switch. The process start neon will illuminate. The red neon on the process timer will illuminate. The lower of the two red hands on the process timer will move anti-clockwise as time elapses until its reaches zero on the dial. The process end neon will then illuminate and the alarm will sound.

Switch off the alarm cancel/process start switch. The process end neon will extinguish and the alarm ceases, the timer will automatically reset for the next process.

MTR 6 CONTROLLER PARAMETERS FOR RETARD CYCLE.



MINIMUM SET POINT

+ 1°C

MAXIMUM SET POINT

+ 5°c

RL1 REST TIME

0

RL1 PROBE FAILURE

OFF

PROBE OFFSET

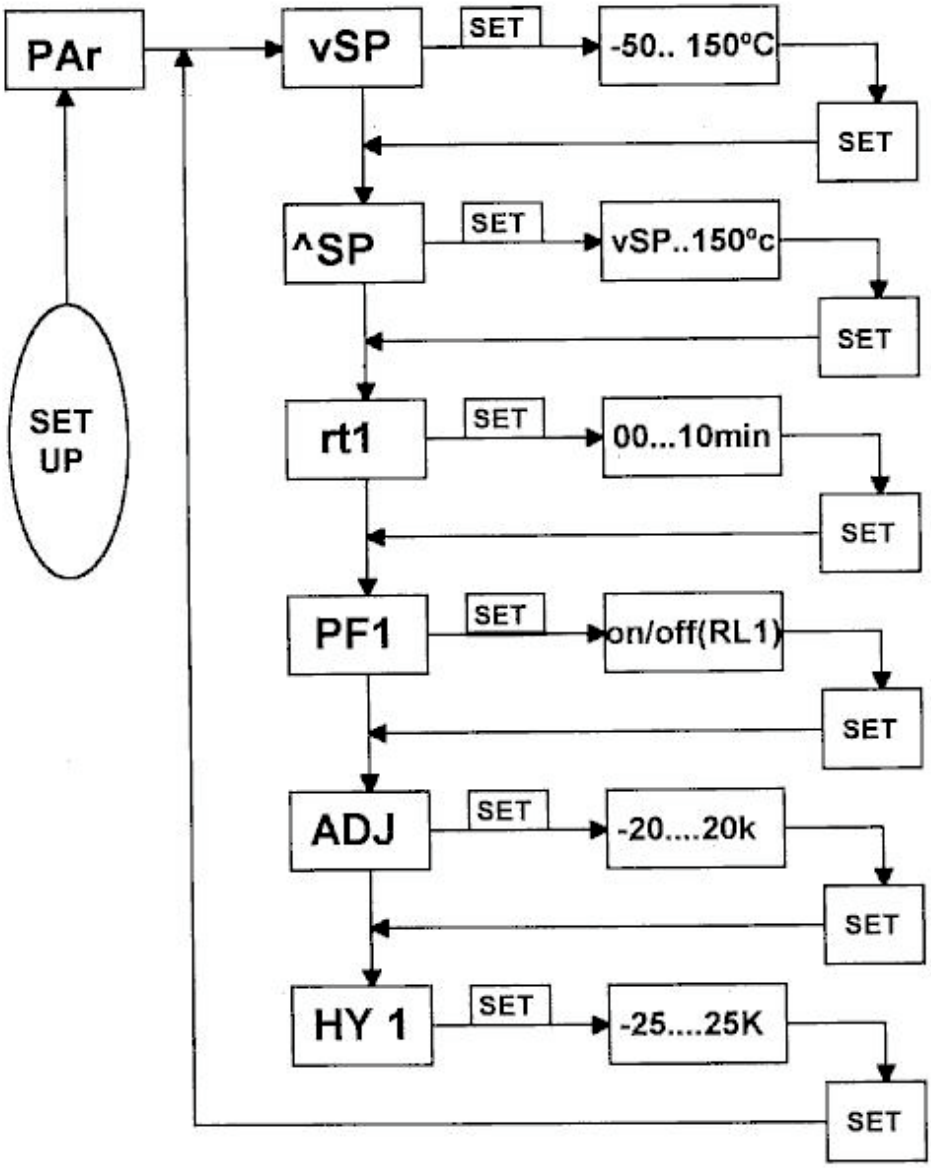
0

RL1 HYSTERSIS

3

To setup configuration mode, hold down both ^(up) and v(down) keys together and switch on power to the instrument. If successful PAr will be displayed. Press ^(up) key and display will show typ. This is the control mode type. i.e. Single stage thermostat.
Press set key and tHS should be displayed. If tHS is not displayed press v(down) key until it is.
Press set key and uSP is displayed. This is minimum operating temperature.
Press set key and the minimum temperature will be displayed. Press ^(up) or v(down) keys to adjust minimum temperature.
Press set key and ^SP will be displayed. This is maximum operating temperature.
Press ^(up) or v(down) keys to adjust.
Press set key and r t 1 will be displayed. This is an off time for the relay in minutes and this should be set at zero.
Press set key and PF1 will be displayed. Press set key and on or off will be displayed. This is probe failure protection and off should be displayed. Press ^(up) or v(down) keys to set this mode for off.
Press set key and Adj will be displayed. This is the probe offset for sensor adjustment Adjustment can be made by pressing ^(up) or v(down) keys.
Press set key and Hy1 will be displayed. This is differential / hysteresis temperature.
NOTE:- For cooling diff. must be set at a positive value between +01 and +25°c and for heating diff. must be set at a negative value between -01 and -25°c.
Press set key and this will then take display back to uSP. Turn off and on again to end op.

MTR 6 CONTROLLER PARAMETERS FOR PROVE CYCLE.



MINIMUM SET POINT
+25°C

MAXIMUM SET POINT
+35°C

RL1 REST TIME
0

RL1 PROBE FAILURE
OFF

PROBE OFFSET
0

RL1 HYSTERSIS
3

To setup configuration mode, hold down both ^(up) and v(down) keys together and switch on power to the instrument. If successful PAr will be displayed. Press ^(up) key and display will show typ. This is the control mode type. i.e. Single stage thermostat. Press set key and tHS should be displayed. If tHS is not displayed press v(down) key until it is.
Press set key and uSP is displayed. This is minimum operating temperature.
Press set key and the minimum temperature will be displayed. Press ^(up) or v(down) keys to adjust minimum temperature.
Press set key and ^SP will be displayed. This is maximum operating temperature.
Press ^(up) or v(down) keys to adjust.
Press set key and r t 1 will be displayed. This is an off time for the relay in minutes and this should be set at zero.
Press set key and PF1 will be displayed. Press set key and on or off will be displayed. This is probe failure protection and off should be displayed. Press ^(up) or v(down) keys to set this mode for off.
Press set key and Adj will be displayed. This is the probe offset for sensor adjustment Adjustment can be made by pressing ^(up) or v(down) keys.
Press set key and Hy1 will be displayed. This is differential / hysteresis temperature.
NOTE:- For cooling diff. must be set at a positive value between +01 and +25°c and for heating diff. must be set at a negative value between -01 and -25°c.
Press set key and this will then take display back to uSP. Turn off and on again to end op.

SPARE PARTS FOR PROVER

15240050.....Heater Assembly 3kw.
15243501.....Rocker Switch.
15243565.....Rocker Switch (illuminated Green)
15244670.....Green neon
15244671.....Red neon.
15244673.....Amber Neon.
15244985.....Buzzer.
15246098.....Temperature controller MTR6.
15452405.....Thermostat EMF5 (Safety).
15452534.....Omron timer HC2.
15841105.....Contactor.

SPARE PARTS FOR RETARDER (R22)

15442811.....Condensing Unit CAJ 9510 TMHR.
15450102.....Expnsion Valve TEF 2-05.
15470015.....Evaporator Fan Motor 7w.
15490414.....Relay 8 Pin Plug In.
15490416.....Relay Socket 8 Pin.
15490415.....Relay 11 Pin
15482001.....Liquid Receiver
15483013.....Sight Glass 3/8".
14480903.....Drier 3/8".

ALL PARTS FOR MODEL PRP.RI 2T. MK2 INCLUDE BOTH OF THE ABOVE LISTS.

INSTALLATION INSTRUCTIONS

1. INTRODUCTION.

Installation of these units should be carried out by a competent person and appropriate codes of practice adhered to - thus ensuring safe installation.

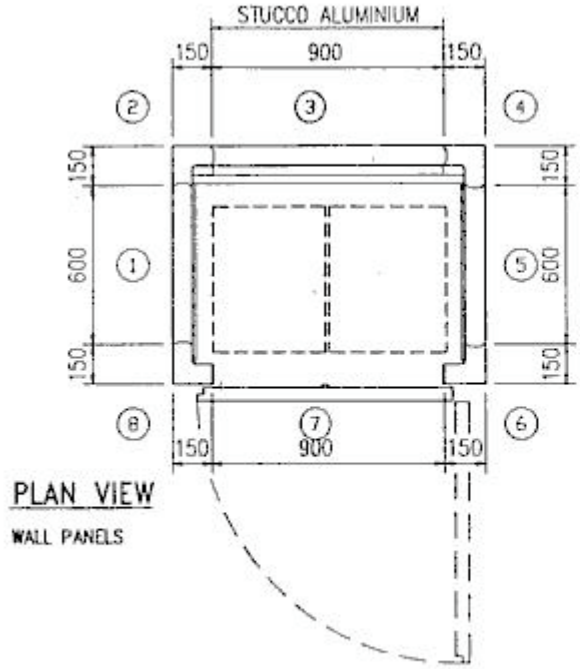
2. REMOVAL OF PANELS FROM PALLET.

The cabinets are of modular construction with wall panels and ancillary parts delivered on a base pallet with either shrinkwrap or wood case protective exterior. this exterior should be removed which, after cutting the band, will allow all the components to be removed, and checked for any damage and and placed in a convenient position nearby ready for assembly.
Depending on the model, there could be more than one crate - so check each one as above.

3.INSTALLATION OF PANELS.

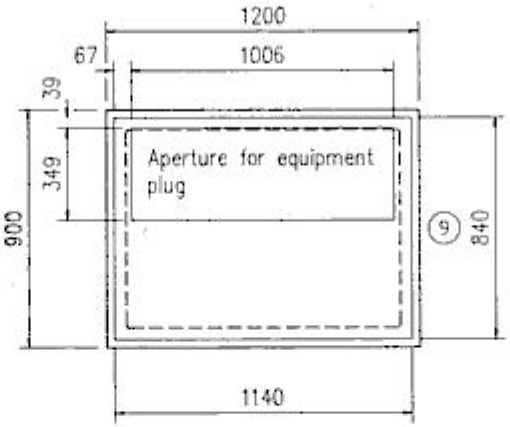
The wall panels are numbered and the following instruction is suggested as a method of installation.
Please check the drawing of modular cabinets to obtain the panel numbers.
The ceiling panel is supplied with the refrigeration system / heater assembly pre-fitted ready for installation once the wall panels are erected.
The cabinets are floorless and therfore, require fitting to a clean level floor. It is recommended that there should be not more than 3 mm tolerance in floor level as this can affect the correct location and locking of panels.
The wall panels are attached to the floor by inserting them into a PVC "U" channel. This is pre-cut and mitred and should be fittd to the floor prior to installation. This can be raw-plugged or hilti-nailed into position and sealed with silicone sealer to prevent moisture penetration.
Ensure that the "U" channel is fixed "squarely" so that the panels will lock together when inserted.
Apply "mastic sealer" to the inside of the channel so that when the panels are located there is a vapour seal.
Wall panels are locked together by means of a camlock operated by a hexagon headed key provided. Between each panel, seal with mastic to provide a vapour seal. All panels are locked internally.
Firstly, assemble rear wall panels with rear corner panels, then assemble side panels and then finally front panels incorporating door frame.
At the top of the wall panel there is a recess which accepts the ceiling panel. There should be mastic sealer applied to this recess so that when ceiling panel is fitted there is a vapour seal.
Lift the ceiling panel with the equipment fitted and lower into the wall recess. The ceiling panel is secured at the rear of cabinet by means of inserting screws into the pre-drilled aluminium. The weight of the condensing unit fitted to this panel keeps it securely in position.
Fit the Stainless Steel side panels to the top of the ceiling panels and the rear of the "plug".
The front console which houses the controls has to be fitted to the front of these Stainless Steel panels. Ensure that the black aluminium "ears" are vertical and parallel.

Fit the square galvanized electrical box to the stainless steel side panel top flange. The holes are pre-drilled for ease of alignment. This box contains the control contactor, electrical terminal block and inter-connecting wiring.
Fit the air ducts to the rear wall of the cabinet through the holes on each side.
Fit the internal aluminium bumper bars to the side walls and in front of the air duct.
Secure hinges to cabinet and then hang doors and make sure that there is a good seal. Also make sure that wiper gasket on the bottom of the door just seals to the floor when closed.



PLAN VIEW

WALL PANELS

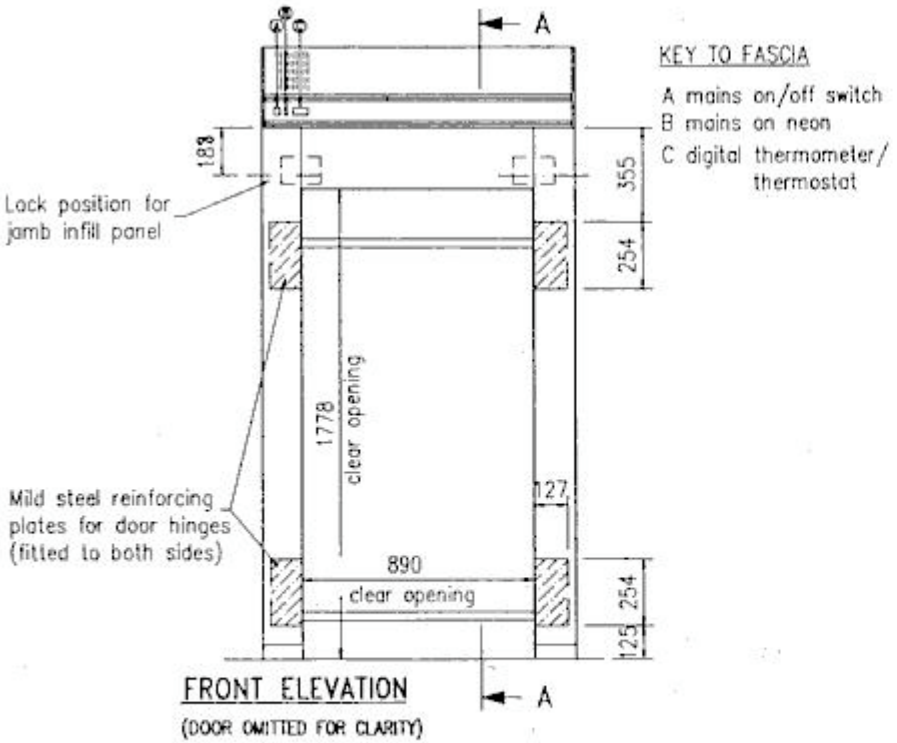


PLAN VIEW

CEILING PANELS

NOTES
1) PIZZA CARTS TO BE SUPPLIED BY FOSTER
2) RIGHT HAND HINGED DOOR IS FITTED AS STANDARD (LEFT HAND DOOR OPTIONAL)
3) ELECTRICAL SUPPLY: 220–240v/50H /1ph 16A SUPPLY

PANEL SCHEDULE	
qty	
1	WPF/A/9/2007
2	WPF/A/6/2007
4	WCF/A/2007
1	228 x 900 DOOR INFILL
1	HAND HINGED WIPER DOOR
1	CPIC/B/840/1140

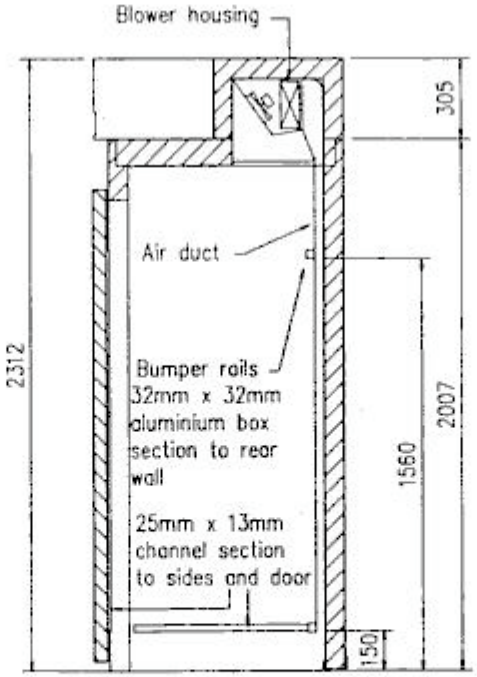


FRONT ELEVATION

(DOOR OMITTED FOR CLARITY)

KEY TO FASCIA

A mains on/off switch
B mains on neon
C digital thermometer/ thermostat



SECTION A–A

FINISH SPECIFICATION
WALLS: INTERIOR – SMOOTH ALUMINIUM EXTERIOR – REAR WALL INDICATED TO BE STUCCO ALUMINIUM – REMAINDER TO BE 0.7mm 430 STAINLESS STEEL
CEILING: INTERIOR – SMOOTH ALUMINIUM EXTERIOR – SMOOTH GALVANISED STEEL
DOORS: INTERIOR & EXTERIOR – 0.7mm 430 STAINLESS STEEL
CONSOLE: BLACK PLASTISOL
UNIT HOUSING: 430 STAINLESS STEEL
UNIT HOUSING RETAINER: ANODISED MATT BLACK ALUMINIUM
END SHROUDS: 430 STAINLESS STEEL

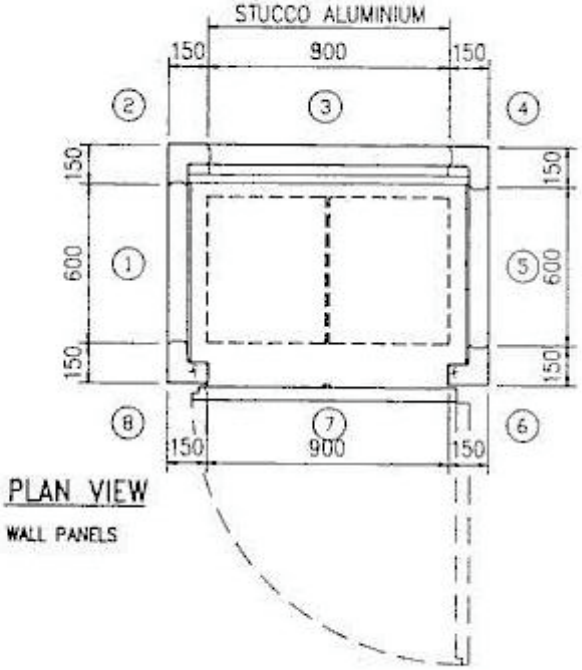
drawn	checked	scale	date	model no.	drawing no.
K.A.H.	CM	1:15	29/11/91		CR12454/C

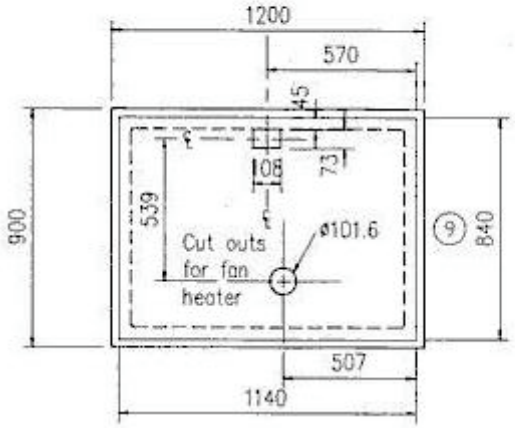
project

title

PR RI 1 T GENERAL ARRANGEMENT
(OPTION A)

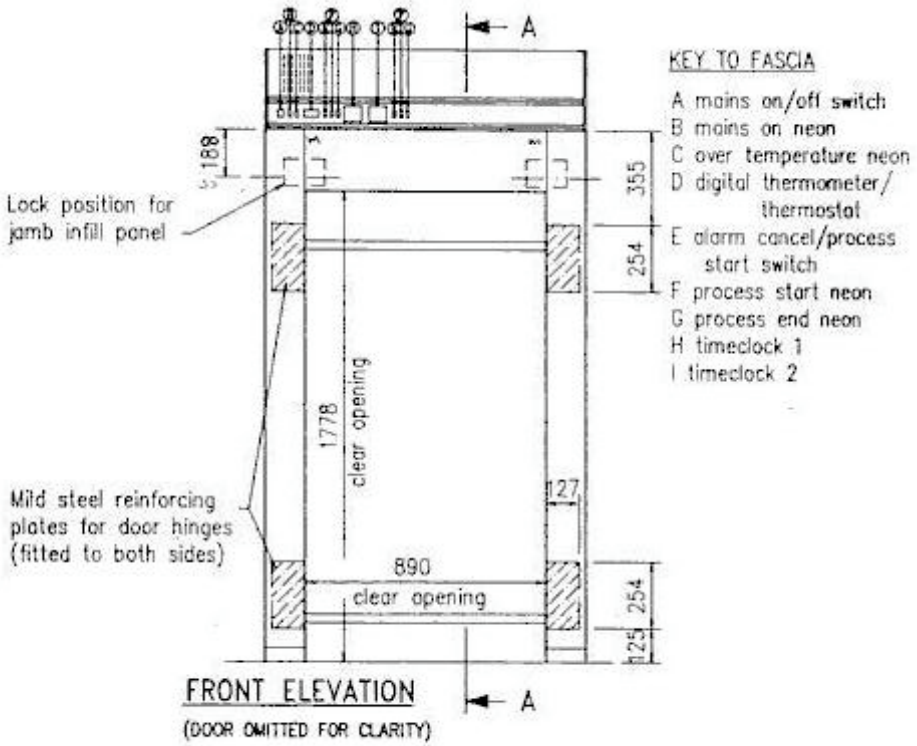
FOSTER Foster Refrigerator (U.K.) Ltd.



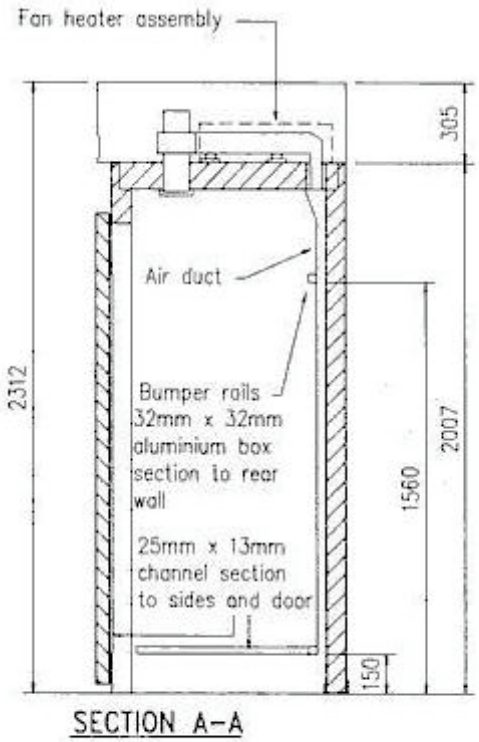


NOTES
1) PIZZA CARTS TO BE SUPPLIED BY FOSTER
2) RIGHT HAND HINGED DOOR IS FITTED AS STANDARD (LEFT HAND DOOR OPTIONAL)
3) ELECTRICAL SUPPLY: 220-240v/50H /1ph 16A SUPPLY

PANEL SCHEDULE	
qty	
1	WPF/A/9/2007
2	WPF/A/6/2007
4	WCF/A/2007
1	228 x 900 DOOR INFILL
1	HAND HINGED WIPER DOOR
1	CPIC/B/840/1140



KEY TO FASCIA
A mains on/off switch
B mains on neon
C over temperature neon
D digital thermometer/ thermostat
E alarm cancel/process start switch
F process start neon
G process end neon
H timeclock 1
I timeclock 2



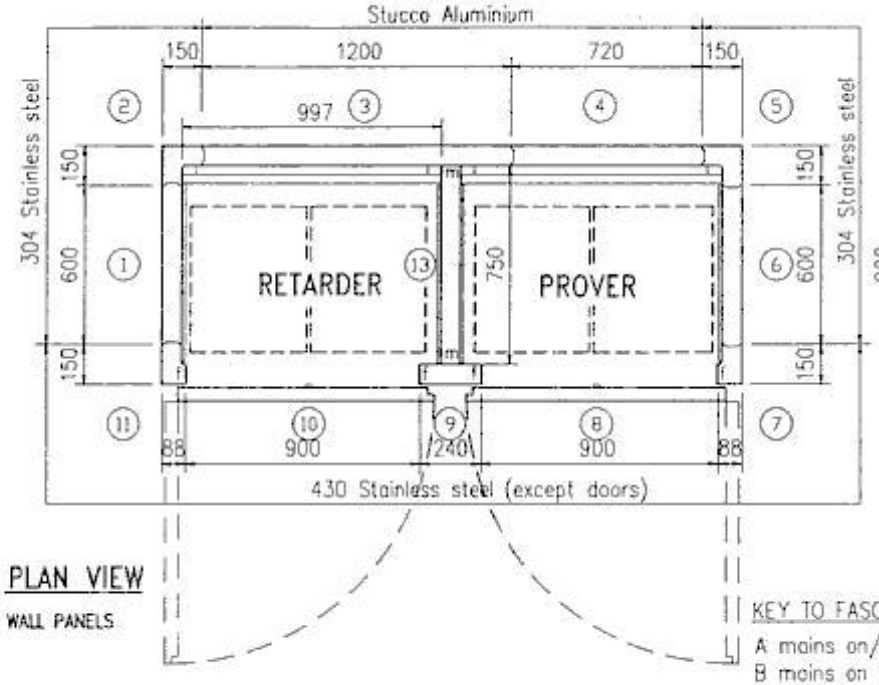
FINISH SPECIFICATION
WALLS: INTERIOR - SMOOTH ALUMINIUM EXTERIOR - REAR WALL INDICATED TO BE STUCCO ALUMINIUM - REMAINDER TO BE 0.7mm 430 STAINLESS STEEL
CEILING: INTERIOR - SMOOTH ALUMINIUM EXTERIOR - SMOOTH GALVANISED STEEL
DOORS: INTERIOR & EXTERIOR - 0.7mm 430 STAINLESS STEEL
CONSOLE: BLACK PLASTISOL
UNIT HOUSING: 430 STAINLESS STEEL
UNIT HOUSING RETAINER: ANODISED MATT BLACK ALUMINIUM
END SHROUDS: 430 STAINLESS STEEL

drawn	checked	scale	date	model no.	drawing no.
K.A.H.		1:15	10/12/91		CR12455/C

material

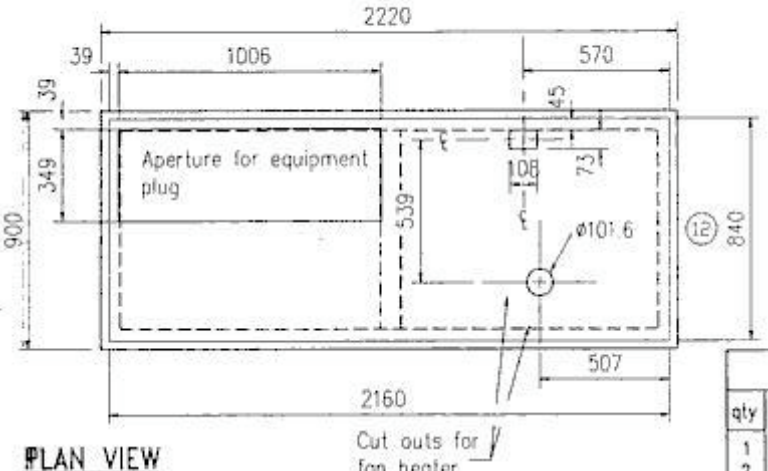
title
PP RI 1 T GENERAL ARRANGEMENT
(OPTION A)

FOSTER Foster Refrigerator (U.K.) Ltd.



PLAN VIEW

WALL PANELS



PLAN VIEW

CEILING PANELS

NOTES

1) PIZZA CARTS TO BE SUPPLIED BY FOSTER

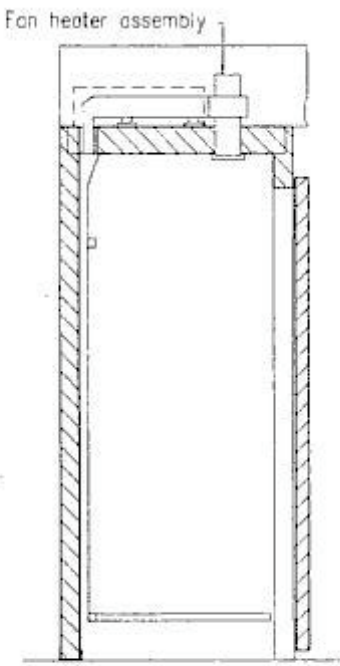
2) ELECTRICAL SUPPLY: 220–240v/50H/1ph 16A SUPPLY

KEY TO FASCIA

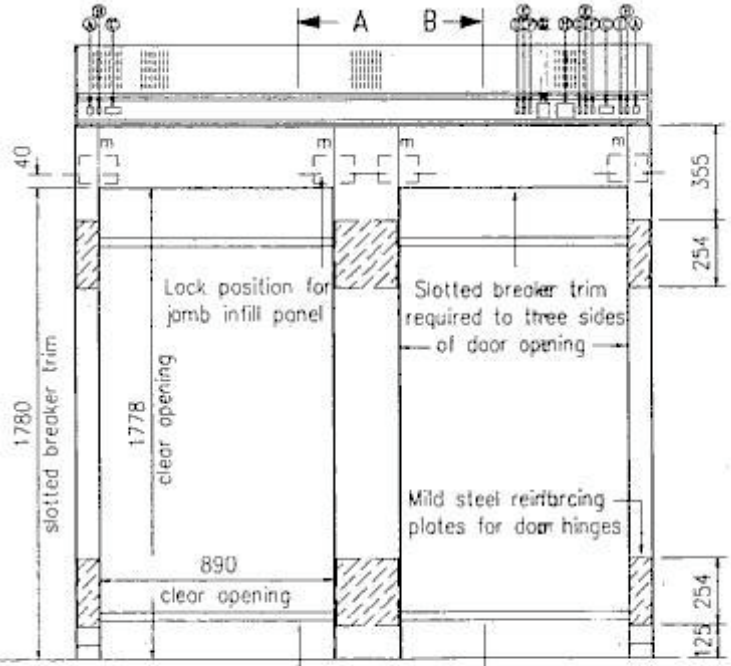
A mains on/off switch
B mains on neon
C digital thermometer/ thermostat
D alarm cancel/ process start switch
E process start neon
F process end neon
G timeclock 1
H timeclock 2
I over temperature neon

PANEL SCHEDULE	
qty	
1	WPF/A/12/2007
2	WPF/A/6/2007
1	WPF/A/720/2007
1	WPF/A/240/2007
1	PPF/A/750/1907 (No locks req'd)
2	WCF/A/150/150/2007
2	WCF/A/150/88/2007
2	228 x 900 DOOR INFILL
1	LEFT HAND HINGED WIPER DOOR
1	RIGHT HAND HINGED WIPER DOOR
1	CPIC/B/840/2160 (No locks req'd)

FINISH SPECIFICATION
WALLS: INTERIOR – SMOOTH ALUMINIUM EXTERIOR – SEE DRAWING
CEILING: INTERIOR – SMOOTH ALUMINIUM EXTERIOR – SMOOTH GALVANISED STEEL
DOORS: INTERIOR & EXTERIOR – 0.7mm 304 STAINLESS STEEL
CONSOLE: BLACK PLASTISOL
UNIT HOUSING: 304 STAINLESS STEEL
UNIT HOUSING RETAINER: ANODISED MATT BLACK ALUMINIUM
END SHROUDS: 304 STAINLESS STEEL

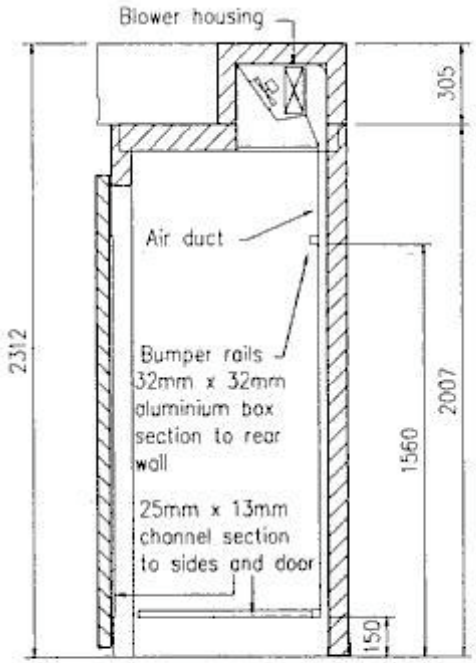


SECTION B–B



FRONT ELEVATION

(DOOR OMITTED FOR CLARITY)



SECTION A–A

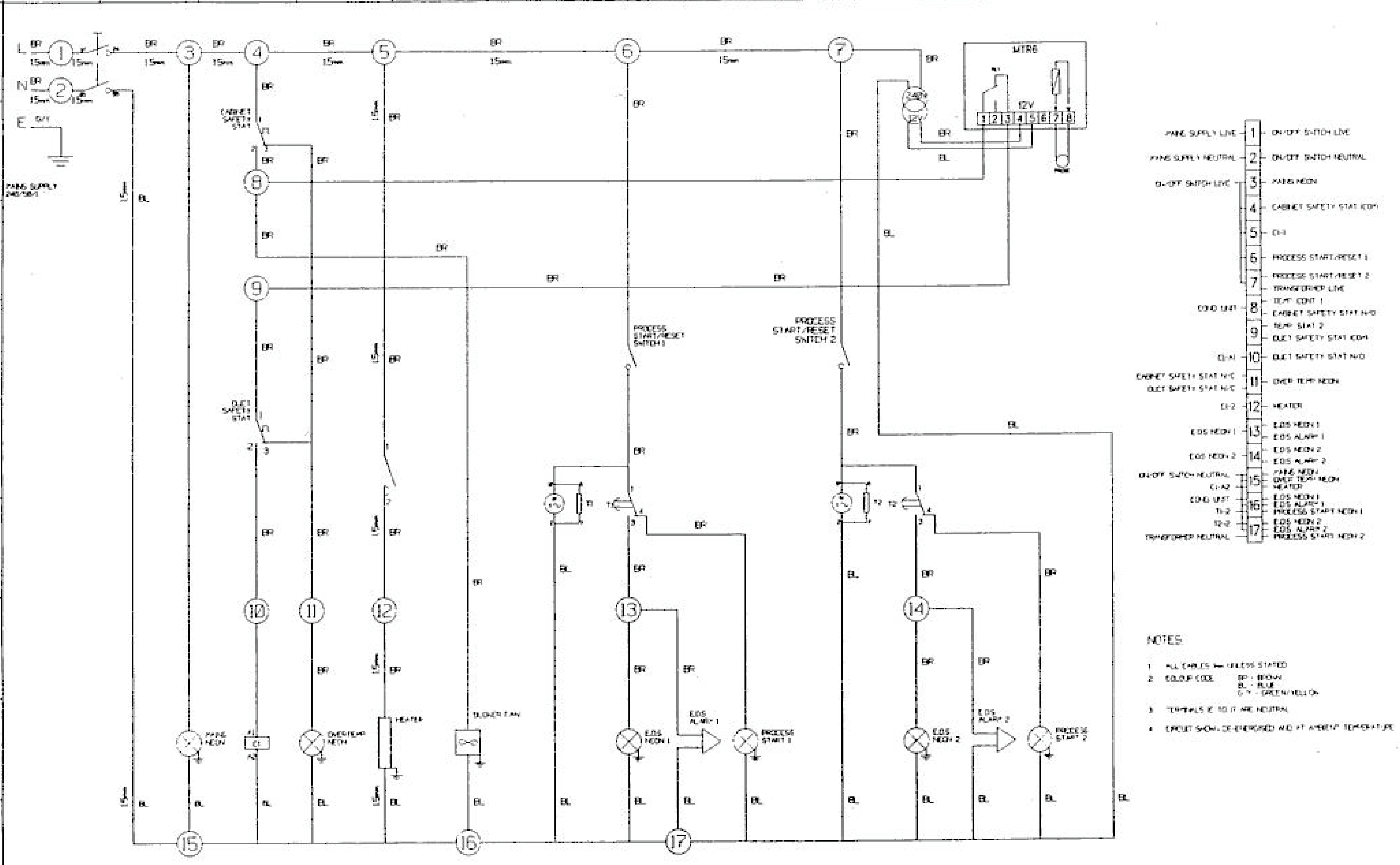
REVISIONS				
rev	description	date	by	checked
A	CORNER PANEL DIMS AMENDED FROM 150 x 90	22/10/93	K.A.H.	CM
B	430 GRADE STAINLESS STEEL REPLACED BY 304 GRADE EXCEPT IN AREAS FOR MAGNETIC APPLICATION	14/4/94	K.A.H.	CM

drawn	checked	scale	date	project no.	drawing no.
K.A.H.	CM	1:15	12/12/91		CR12456/C

Revision B

PRP RI 2 T GENERAL ARRANGEMENT (OPTION A)

FOSTER Foster Refrigerator (U.K.) Ltd.



NOTES

1. ALL CABLES 1mm UNLESS STATED
2. COLOUR CODE BR - BROWN
   BL - BLUE
   G/Y - GREEN/YELLOW
3. TERMINALS 15 TO 17 ARE NEUTRAL
4. CIRCUIT SHOWN DE-ENERGISED AND AT AMBIENT TEMPERATURE

NO.	DESCRIPTION	BY	DATE
G	TERM NUMBERS ADDED TO SAFETY STATS	SHF	1/59
F	WIRING CHANGED AND RE-DRAWN	MG	2/95

FOSTER REFRIGERATOR (U.K) LTD
OLDMEDOW ROAD KING'S LYNN NORFOLK PE30 4JU

TITLE: WIRING DIAGRAM FOR PRP-R1-1-T AND PROVE MODE OF PRP-R1-2-T

DRAWING NO.: R16425/C
DRAWN: MG
SCALE: N.T.S
DATE: 2/3/93