Prep Station

FOSTER

Service Manual

PREP STATION

CONTENT	PAGE

MODEL REF	PMC 1H	PMC 2H	PMC 3H	PMC 4H	PMC 5H
Raised top	PMC 1 HRT	PMC 2 HRT	PMC 3 HRT	PMC 4 HRT	PMC 5 HRT
Flat top	PMC 1 HFT	PMC 2 HFT	PMC 3 HFT	PMC 4 HFT	PMC 5 HFT
1/3 Gastronorm pan storage (not supplied)	3	6	9	12	15
No. of shelves supplied	2	4	6	8	10

INTRODUCTION

The Prep Station is designed as a Pizza Make and Sandwich Preparation Counter having 2 storage areas:

a. Main storage compartment beneath the work surface.

b. Pan storage whereby Ingredients are stored in Gastronorm containers inserted into a raised or flush pan holder.

The storage temperatures are +1/+4°C in the main storage compartment and +3/+5°C ingredient temperature in the top pans. The latter is based on the product being pre-chilled to +1/+4°C in the main compartment and the product temperature taken 25mm below the surface which is 25mm below the top of the counter in an ambient of 27°C.

CABINET DESCRIPTION

The cabinets are manufactured as a one piece foamed shell with the air cooled refrigeration system housed in a unit compartment at low level at the rear. Cooling air for the condenser is drawn in through the base at one end of the compartment and warm air discharged at the other.

The external finish is 304 grade stainless steel whilst the interior is aluminium. Behind each door there are two Rilsan coated shelves mounted on adjustable anti tilt stainless removable tray slides.

The top pan storage compartment will accommodate a combination of gastronorm pans however supports will be required for pans smaller than 1/ 3 rd size.

The cooling system is forced air for both the main storage and top pan compartments.

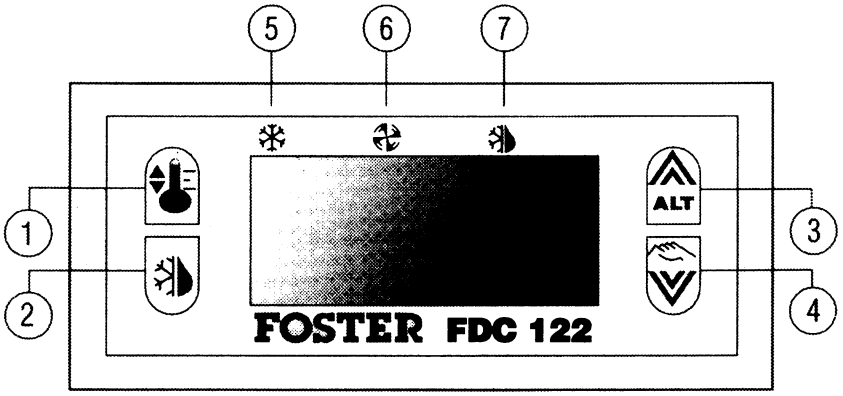
Accurate Temperature is achieved using a Microprocessor Controller which, has a digital display showing the internal cabinet temperature. Defrosting the evaporator occurs automatically, using hot gas from the compressor, and should the internal temperature rise or fall below pre-set limits an audible and visual alarm will operate. The refrigeration system is capillary controlled using R134a refrigerant. Vaporisation of the evaporator condensate water is achieved using an electrically heated tray.

2 CONTROLLER AND OPERATION

FDC 122 - MICROPROCESSOR CONTROLS

1.0 The Microprocessor Controller - FDC 122 (15246151)

1.1 All controller parameters are factory set for optimum storage conditions. The parameters should only be adjusted by persons familiar with the unit operation and controller functions.
Certain parameters however may be adjusted within limits, to suit certain storage needs.



1.2 Check set point - Low point of temperature band.

1. Press button 1 ( )

1.3 Increase Set Point

1. Press and hold button 1 ( )
2. Press button 3 (ALT) until required temperature is displayed.

1.4 Decrease Set Point

1. Press and hold button 1 ( )
2. Press button 4 ( ) until required temperature is displayed.

1.5 Manual Defrost

1. Press and hold button 2 ( )
2. Press button 4 ( ) a timed defrost will follow.

1.6 Indicators

1. LED 5 Compressor on ( )
2. LED 6 Evaporator Fan on ( )
3. LED 7 Defrost on ( )
4. PF1 or PF2 : Indicates a probe failure - call engineer.

1.7 Adjustment Parameters

Cabinet Setting
+1 / +4

FDC 122 - THERMOSTAT FUNCTION

1.0 Thermostat Function - FDC 121 and FDC 122

SPL Minimum set point (ºC).
Maximum allowable low alarm setting (ºC).

SPh Maximum set point (ºC).
Maximum allowable high alarm setting (ºC).

hyS Temperature hysteresis (ºK).

coF Compressor minimum off time (mins).

con Compressor minimum on time (mins).

cdc Cooler duty cycle. Compressor on duration during a ten minute cycle e.g. **cdc** = 04, 4 min on time, 6 min off time (active only under probe fault conditions **PF1**).

crS Compressor start delay (secs).

1.1 Defrost Function

drE Time between defrosts (hrs).

dLi Defrosts termination temperature (ºC).

dto Defrost termination time (mins). Unused if set to zero.

drP Drain down time (mins).

diS Display during defrost:-

00	=	Temperature display
-01	=	dEF is displayed during defrost and until air temperature falls below the value setpoint + hysteresis.
1..30 (mins)	=	dEF is displayed during defrost and until the set time has elapsed after defrosting or until air temperature falls below the value setpoint + hysteresis.

dtY Defrost Type

FAn	=	Off cycle defrost.
ELE	=	Electric heater defrost.
GAS	=	hot gas defrost.

doP Defrost Optimisation

con	=	At regular intervals of **drE** (hrs).
Acc	=	Defrost timer only runs while evaporator temperature is below 0ºC, defrosting occurs when **drE** time has elapsed e.g. if compressor cycle time is 5 min run and 5 min stop and **drE** = 4, defrosting will take place every 8 hours approx

FDC 122 - THERMOSTAT FUNCTION

1.2 Evaporator Fan Control

Fct Evaporator fan control during cooling

-01	=	continuous operation.
00	=	cycle on/off with compressor.
1..10 (mins)	=	start with compressor, set time delay stop after compressor.

Frs Fan delay temperature following defrost (ºC).

Fid Evaporator fan operation during defrost:-

00	=	off until fan delay temperature **FrS** (ºC) is reached.
01	=	on while evaporator temperature is below valve **FrS** (ºC).
02	=	on during defrost.

1.3 Alarm Function

Alo Low temperature alarm setting (ºC).

Ahi High temperature alarm setting (ºC).

AdL Alarm delay (min).

00	=	instantaneous audible alarm.
01..120	=	duration of delay (min).
-01	=	alarm is disabled.

Ain Determines which probe is monitored for alarm functions:-

1	=	air probe (probe 1).
2	=	evaporator probe (probe 2).
3	=	food probe (probe 3)

1.4 Thermal Mass Simulation

oS1 Thermostat (Air probe) offset (ºK).

oS2 Evaporator probe offset (ºK).

oS3 Display offset (ºK). - where fitted.

SiM Controls the thermal mass volume simulated by the controller and displayed on the fascia.
The greater the value the greater the resulting display slow down. The controlling function remains to operate directly on ait temperature.

00	=	instantaneous ir temperature display.
01..200	=	thermal mass simulation.

Adr Controller peripheral number - only used where controllers are networked.

FDC 122 - DISPLAY

1.0 Display

1.1 When the unit is switched on the display shows "- - -" for a period of five seconds, during which the controller performs a self check. The display then shows the air temperature measured by probe 1.

The coil temperature, measured by probe 2 may be viewed by pressing [ ]

1.2 Access to the control parameters is achieved by pressing in sequence:-

[ ] + [ ] + [ALT] and holding in the keys for a period of 4 seconds.

It is possible to scroll through the parameters by pressing:-

[ ] or [ALT]

The value of a selected parameter is checked by pressing:-

[ ] and may be altered by pressing at the same time [ ] + [ALT] or [ ]

Exit from setup occurs after 10 seconds if no key is pressed.

1.3 If an alarm condition is entered the alarm buzzer will sound and **'ALM'** will flash on the display. The alarm may be acknowledged by pressing any key causing the buzzer to cease and the display to alternate between **'ALM'** and ait temperature while the alarm condition persists. The alarm will also re-sound every 30 minutes while an alarm condition persists.

3 CONTROLLER SETTINGS

FDC 122 - LOW TEMPERATURE SETTINGS

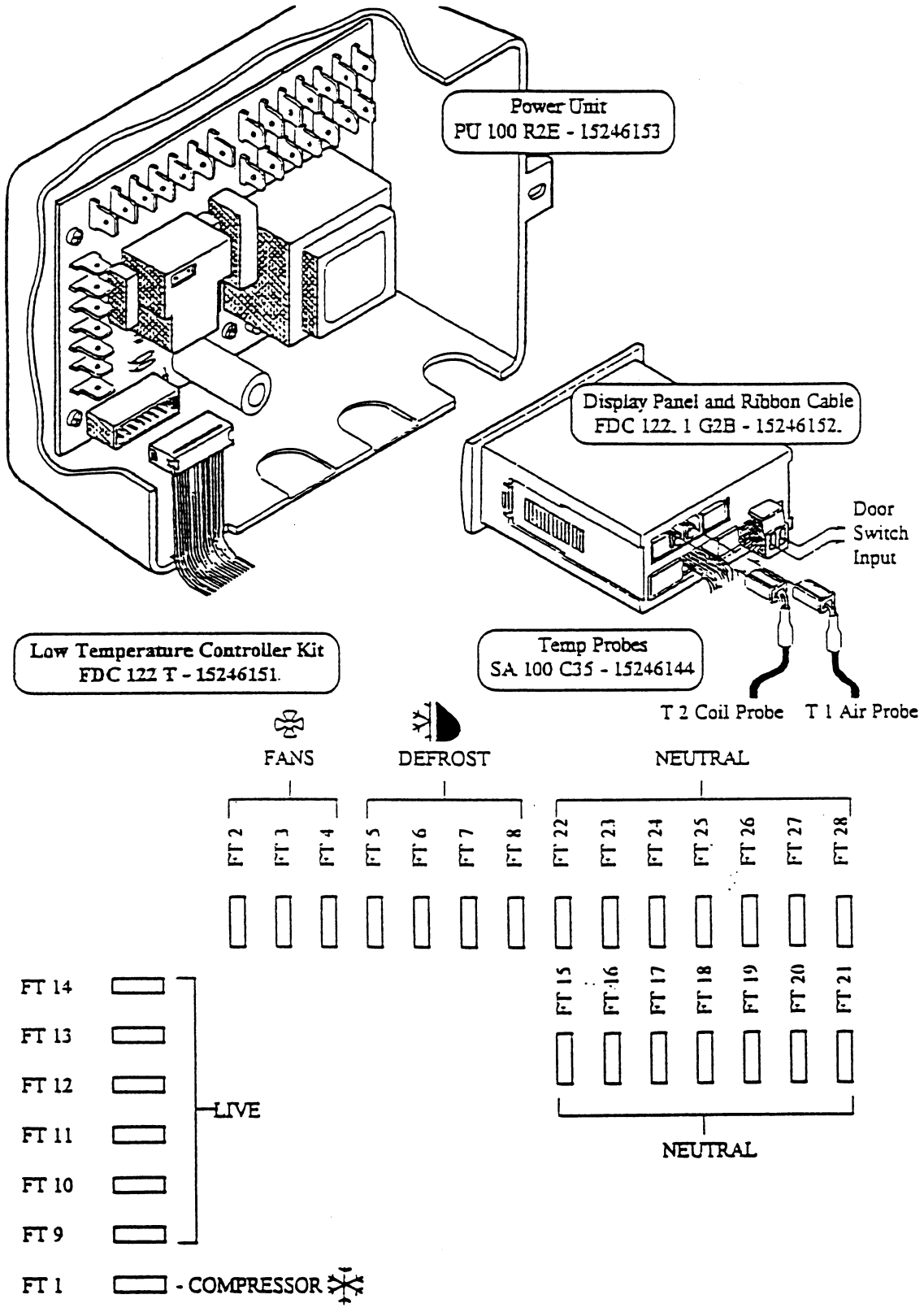
to be changed from standard

FDC 122 LOW TEMP SETTING	Set Point	Min Set Point	Max Set Point	Temp Hysteresis	Comp Min Off Time	Comp Min On Time	Comp Duty Cycle at PF	Comp Start Delay	Defrost Interval	Defrost End Temp	Defrost Duration	Drain Down Times	Disp. During Defrost	Defrost Type	Defrost Optimisation	Evap Fan Control	Fan Delay Temp	Fan Operation	Low Alarm Set	High Alarm Set	Alarm Delay	Alarm Probe	Air Offset	Evap Offset	Display Offset	Thermal Mass Simulation	Peripheral Number
Set Valve	Deg	Deg	Deg	Deg	Min	Min	%	Sec	Hrs	Deg	Min	Min	Min	Flag	Flag	Min	Deg	Flag	Deg	Deg	Min	Flag	Deg	Deg	Deg	Flag	01
M nemonic		SPL	SHh	hYS	coF	con	cdc	crs	drE	dLi	dto	drP	diS	dtY	doP	Fct	FrS	Fid	ALo	Ahi	Adl	Ain	OS1	oS2	oS3	SIM	Adr
Std. Setting	-21	-23	-15	3	00	00	6	00	6	30	20	3	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1
All Models	1	0	5								15	1		GAS			1		0	10							

4 ELECTRICAL CONNECTIONS

Temperature Controllers

FDC 122 T - CONTROLLER KIT AND CONNECTIONS



5 PRODUCT SPECIFICATION

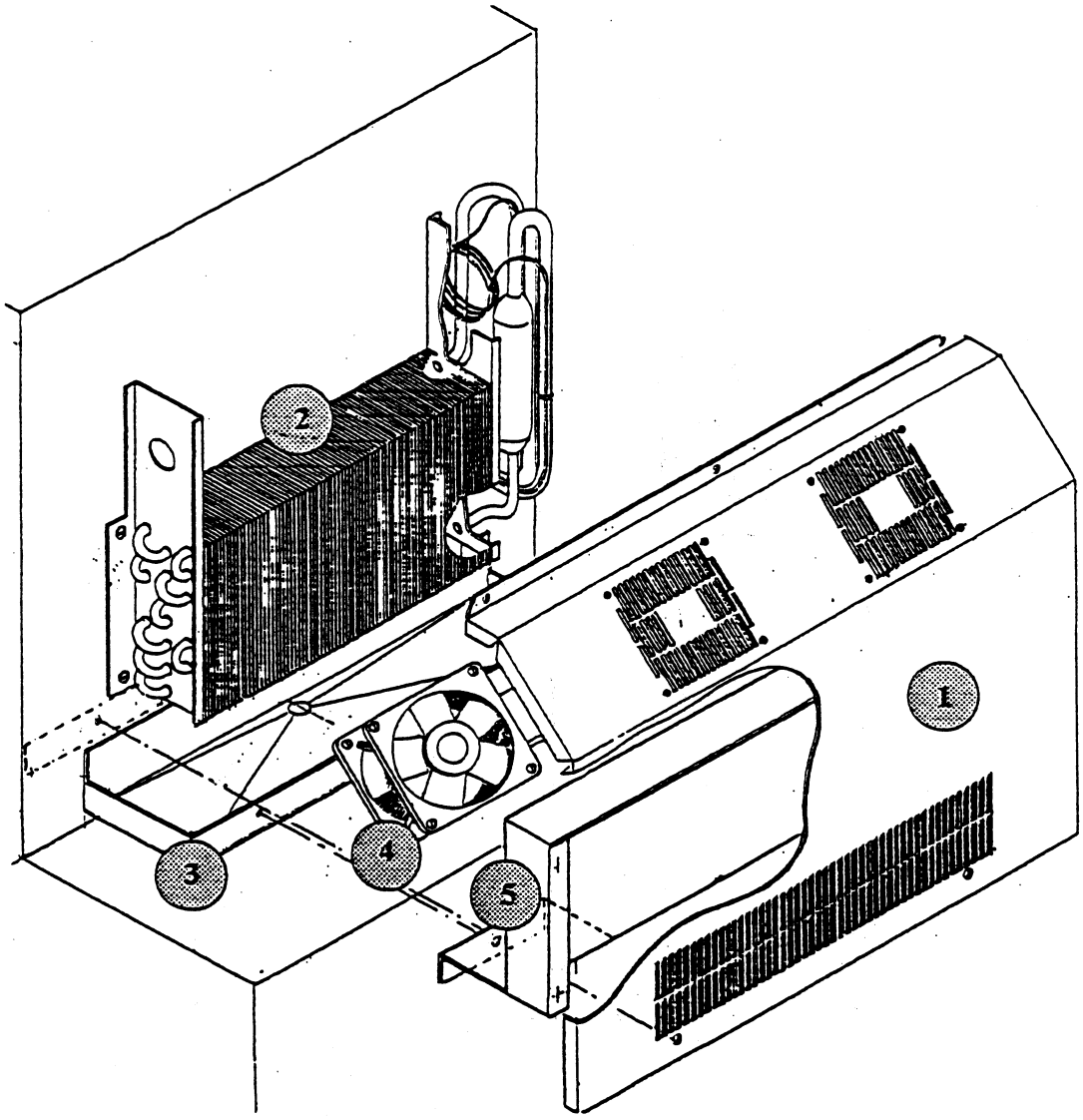
MODEL		Capacity Litres	Noise Level	Heat Output	COMP.	REF.	REF. Grams	Capillary Size	Standard Voltage	Watts/Amps	Defrost Type	Condensate Vapourization	NETT KGS
PMC1HFT	PMC-1H	152	64.5dB re1pw	498 W	AZ4419Y	R134a	200	3m x 0.042	230-50-1	282 \ 1.75	Hot Gas	Electric	102
PMC1HRT													120
PMC2HFT	PMC-2H	244	70.5dB re1pw	1210 W	CAE4440Y	R134a	370	3m x 0.042	230-50-1	830 \ 4.93	Hot Gas	Electric	144
PMC2HRT													164
PMC3HFT	PMC-3H	381	68.5dB re1pw	1640 W	CAJ4452Y	R134a	500	3m x 0.054	230-50-1	1190 \ 5.75	Hot Gas	Electric	187
PMC3HRT													207
PMC4HFT	PMC-4H	518	70.5dB re1pw	2180 W	CAJ4492Y	R134a	730	3m x 0.064	230-50-1	1330 \ 8.15	Hot Gas	Electric	230
PMC4HRT													245
PMC5HFT	PMC-5H	655	71.0dB re1pw	2180 W	CAJ4492Y	R134a	900	3m x 0.064	230-50-1	1400 \ 8.55	Hot Gas	Electric	255
PMC5HRT													265

re1pw = Reference 1 pico watt as of BS4196 Part 3

6 CABINET DRAWINGS

Pizza Make Counter

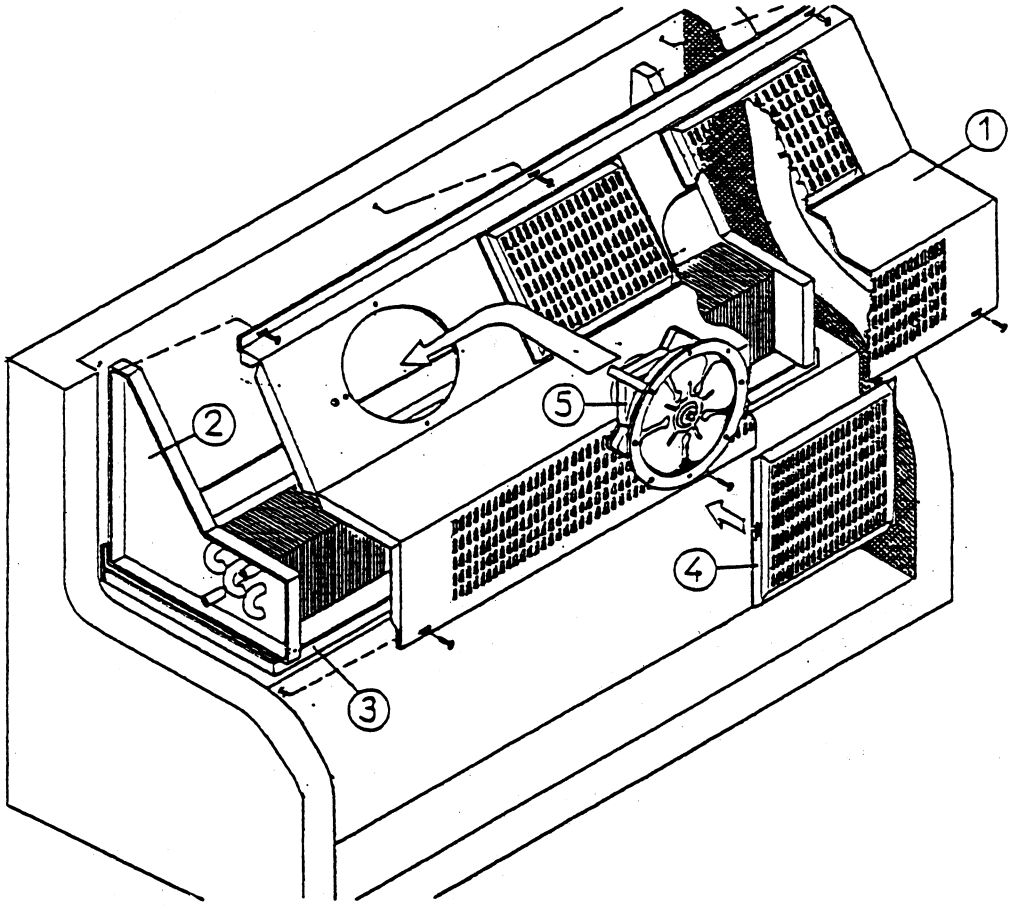
BLOWER HOUSING ASSEMBLY - PMC 1H



No.	Item	PMC 1H
1	Evap Housing	RI 14112
2	Evap Coil	15462027
3	Evap Drain Pan	RI 14113
4	Evap Fan & Motor	15470076
5	Evap Baffle	RI 14158

Pizza Make Counter

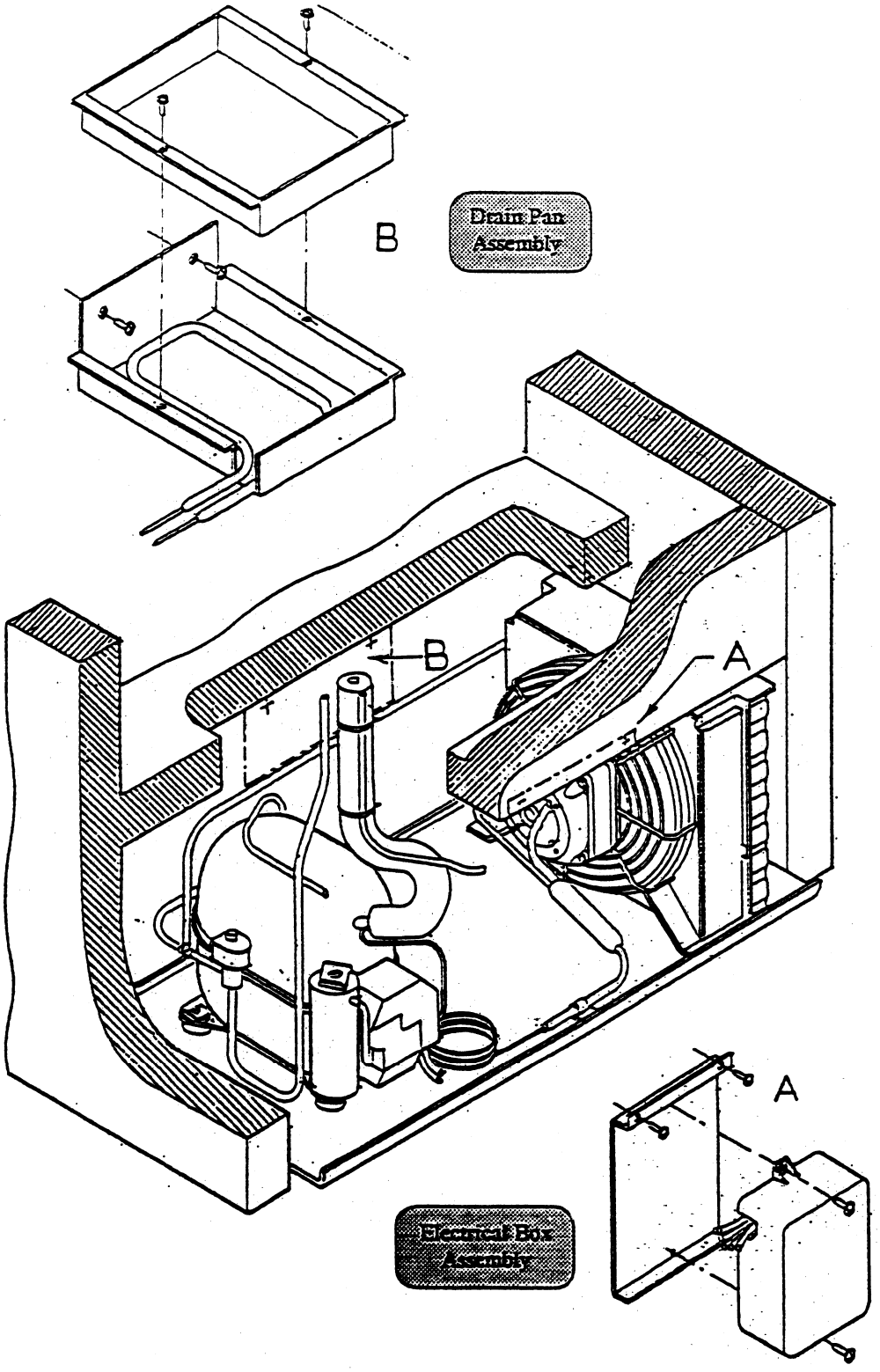
BLOWER HOUSING ASSEMBLY - PMC 2 TO 5H



No.	Item	PMC 2H	PMC 3H	PMC 4H	PMC 5H
1	Evap Coil / Fan Housing	RI 13979/A	RI 13944	RI 14003	RI 14016
2	Evap Coil	F15464452	F15464453	F15464454	F15464454
3	Evap Drain Pan	RI 13982/A	RI 13970	RI 14006	RI 14019
4	Evap Fan Guard	RI 13945/A	RI 13945	RI 13945	RI 13945
5	Evap Fan & Motor	15470007	15470007	15470007	15470007

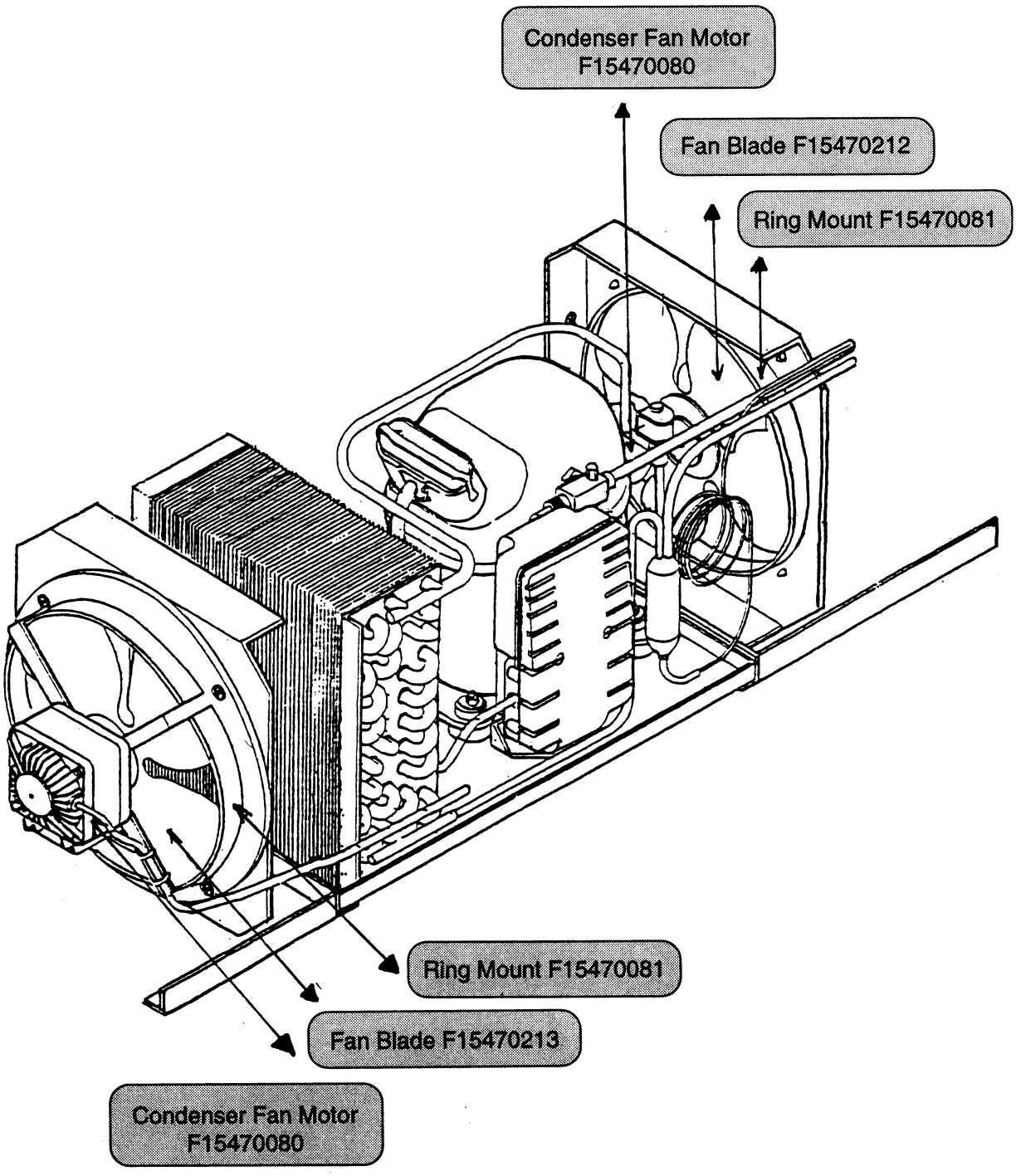
Pizza Make Counter

COMPRESSOR / CONDENSER ASSEMBLY - PMC 1H



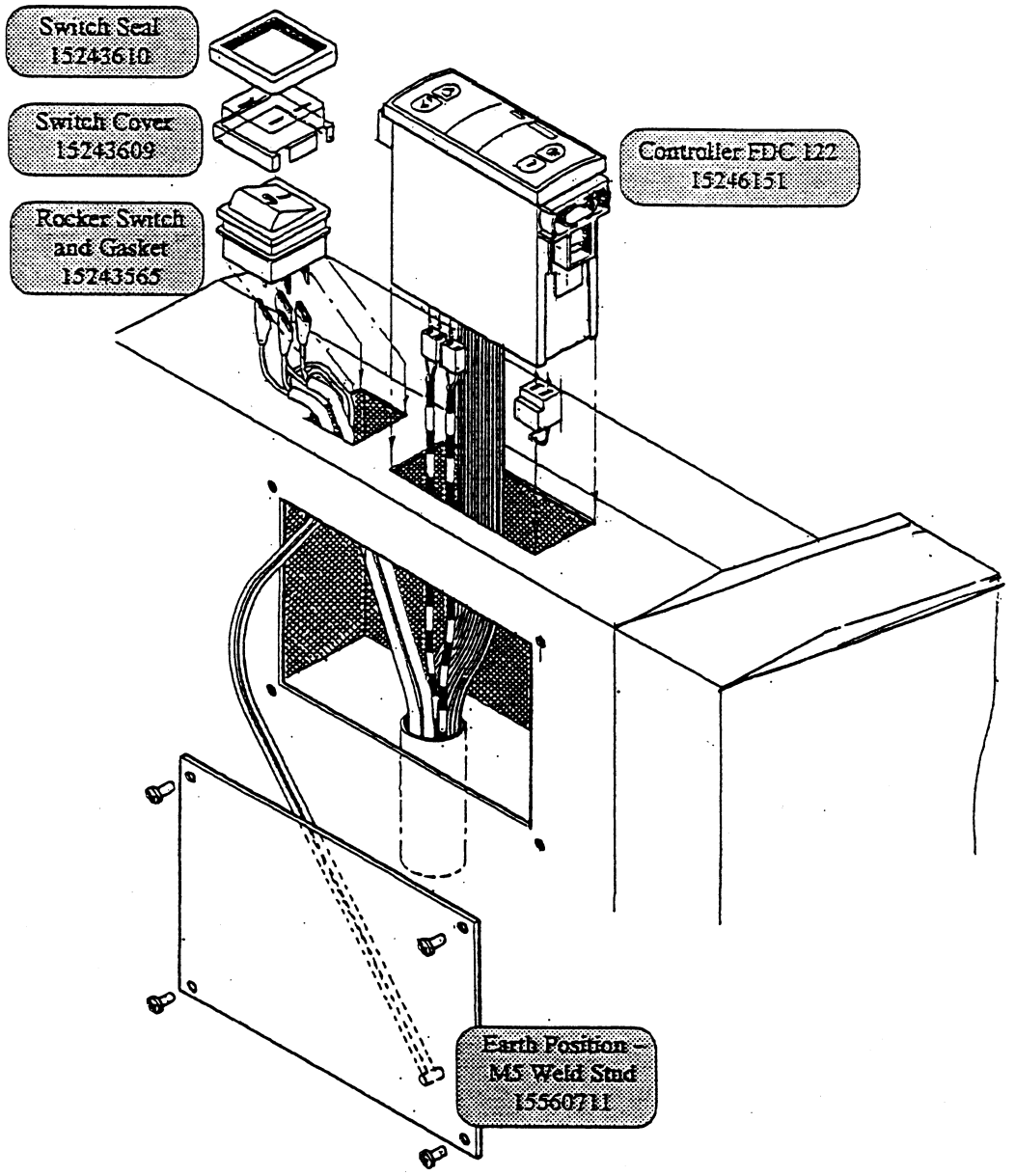
Pizza Make Counter

COMPRESSOR / CONDENSER ASSEMBLY - PMC 2H TO 5H



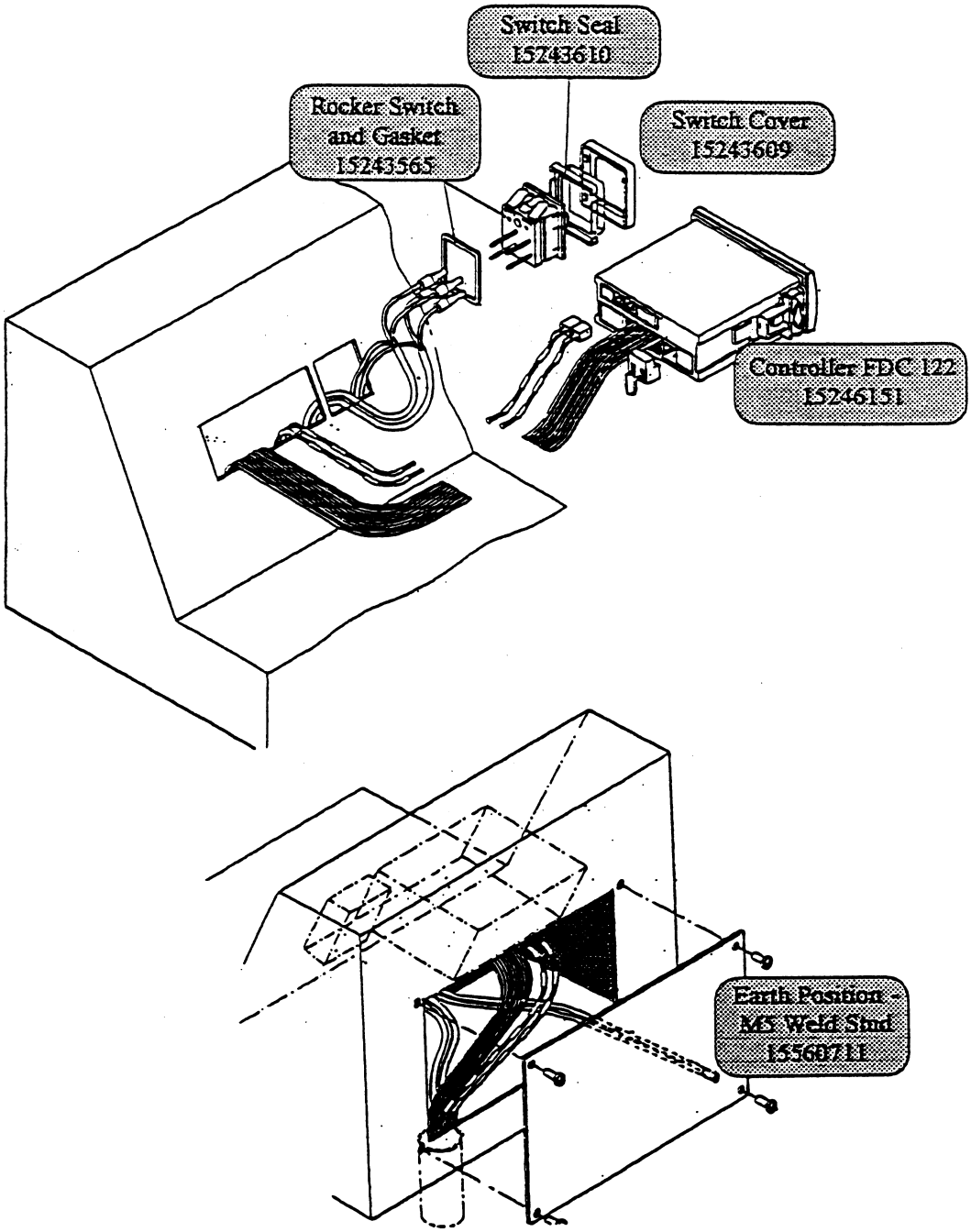
Pizza Make Counter

CONTROLLER AND ON / OFF SWITCH - PMC 1 TO 5 HRT



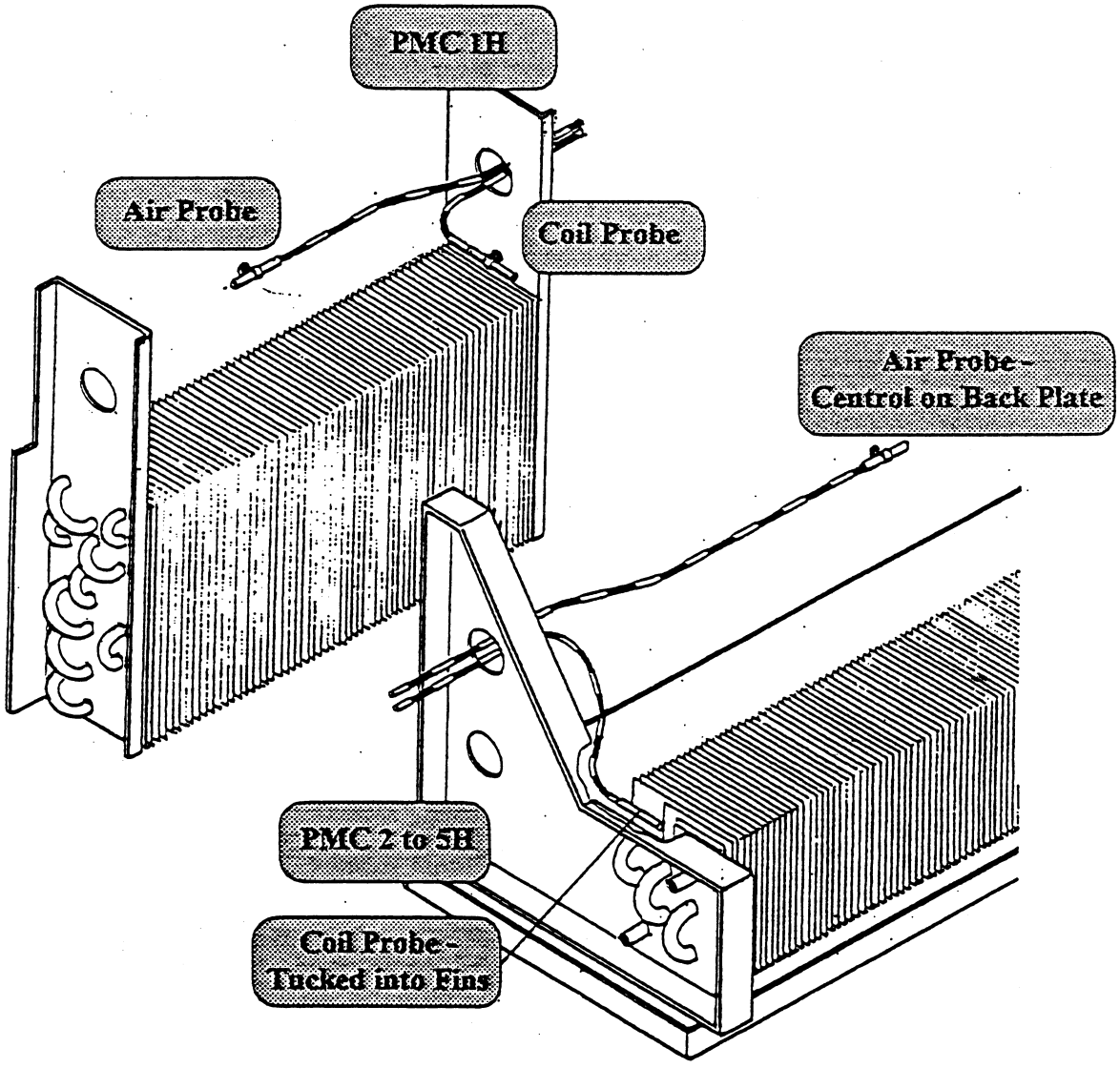
Pizza Make Counter

CONTROLLER AND ON / OFF SWITCH - PMC 1 TO 5 HFT



Pizza Make Counter

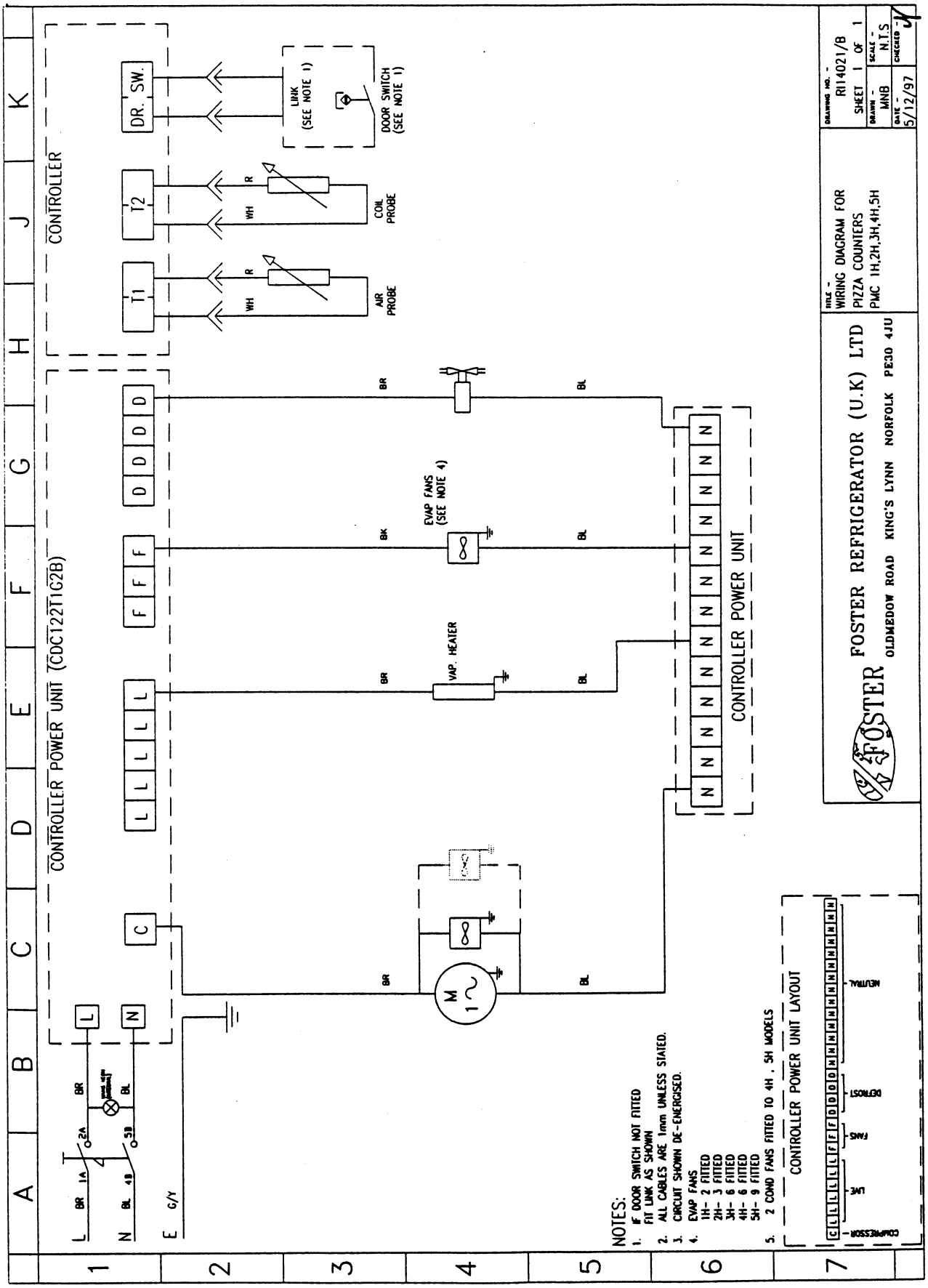
PROBE POSITIONS - ALL MODELS



7 PARTS LIST

Description		Product Code
COMPRESSOR		
AZ4419Y	PMC 1H	F15422010
CAE440Y	PMC 2H	F15422044
CAJ4452Y	PMC 3H	F15422040
CAJ4492Y	PMC 4H & PMC 5H	F15422102
Hot gas solenoid valve		F15451251
Vapouriser Heater		
Model PMC 1H		F15240624
Models PMC 2H / 3H / 4H / 5H		F15240625
Control Panel		
Rocker switch and seal		F15243565
Rocker switch cover		F15243609
Switch panel seal		F15243610
FDC 122T Controller Kit		F15246151
Display panel & Ribbon Cable FDC 122		F15246152
Power Unit DU100 R2E		F15246153
Temp Probes = Air Probe T1 & Coil Probe T2		F15246144
Castors		
Model PMC 1H		F15230141
Models PMC 2H / 3H / 4H / 5H	75mm Swivel	F15230138
Models PMC 2H / 3H / 4H / 5H	75mm Swivel Brake	F15230142
Door Gasket		
Model PMC 1H		F15211806
Models PMC 2H / 3H / 4H / 5H		F15211794
Hinge		
Model PMC 1H	R/H Bottom	F15230527
Model PMC 1H	R/H Top	F15230526
Models PMC 2H / 3H/ 4H/ 5H	R/H Bottom	F15230520
Models PMC 2H / 3H/ 4H/ 5H	L/H Bottom	F15230521
Models PMC 2H / 3H/ 4H/ 5H	R/H Top	F15230522
Models PMC 2H / 3H/ 4H/ 5H	L/H Top	F15230523
Night cover hinge	R/H	F15230437
Night cover hinge	L/H	F15230436
Evaporator Fans		
PMC 1H	x2	F15470076
PMC 2H	x3	F15470077
PMC 3H	x6	F15470077
PMC 4H	x7	F15470077
PMC 5H	x9	F15470077
Condenser Fan/s		
PMC 1H	Complete Assembly	F15470032
PMC 2H	Motor + Ringmount + Blade	F15470080 + F15470081 + F15470213
PMC 3H	Motor +Ringmount + Blade	F15470080 + F15470081 + F15470213
PMC 4H		Refer to page 11
PMC 5H		Refer to page 11

8 WIRING DIAGRAMS



Foster European Operations

France
Foster Refrigerator France SA
Tel: 33 (01) 34 302222. Fax: 33 (01) 30 376874.

Germany
Foster Refrigerator GmbH
Tel: 49 (202) 64780. Fax: 49 (202) 643044.

Austria
Foster Refrigerator Austria
Tel: 43 (1) 815 1511. Fax: 43 (1) 813 29 36.

Spain/Portugal
Foster Refrigerator (Iberica)
Tel: 34 (43) 463222. Fax: 34 (43) 463246.

Holland
Hobart Foster Holland BV
Tel: 31 (348) 433 331. Fax: 31 (348) 430 117.

Belgium
Hobart Foster Belgium NV
Tel: 32 (16) 606040. Fax: 32 (16) 605988.

Denmark
Hobart Foster Danmark A/S
Tel: 45 (98) 141199. Fax: 45 (98) 141703.

Norway
Hobart Foster Norge A/S
Tel: 47 (67) 533878. Fax: 47 (67) 536742.

Sweden
Hobart Foster Sverige AB
Tel: 46 (86) 280030. Fax: 46 (86) 280024.

PMI FEG Offices

Asia/Pacific
PMI Food Equipment Group (Hong Kong) Ltd
Tel: (852) 3419315. Fax: (852) 3413914.

Middle East
PMI Food Equipment Group (Dubai)
Tel: 971 (4) 497393. Fax: 971 (4) 448232.

Japan
PMI Food Equipment Group (Japan) Inc
Tel: 81 (3) 37443511. Fax: 81 (3) 37444011.

Malaysia
PMI Food Equipment Group (Malaysia) Inc
Tel: 603 780 6779. Fax: 603 781 4535.

Singapore
PMI Food Equipment Group (Singapore) Inc
Tel: 65 665 0487. Fax: 65 665 0487.

IMPORTANT:

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

To the user
Do not discard this document: it contains important guidelines on loading, cleaning and maintenance and should be kept for reference.

Foster Refrigerator Group of Companies,
Oldmedow Road, King's Lynn,
Norfolk, PE30 4JU
England

Tel: 01553 691122
Fax: 01553 691447

PMC/SM/9/98

FOSTER

Service Manual