

Service manual
for the
FDC 121 and FDC 122
microprocessor control panels

Copyright

Copyright Foster Refrigerator (UK) Limited, November 2000

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of Foster Refrigerator (UK) Limited.

Foster Refrigerator (UK) Limited
Oldmedow Road
KING'S LYNN
PE30 4JU
United Kingdom

Tel: +44 (0) 1553 691122

Fax: +44 (0) 1553 691447

Web: www.fosterrefrigerator.co.uk

Safety of personnel

Liability

Foster Refrigerator (UK) Limited decline responsibility when an attempt is made to use the refrigerator for any purpose other than that for which it was designed.



WARNING!

THOSE WHO MAINTAIN THE REFRIGERATOR MUST BE TRAINED IN STANDARD REPAIR AND MAINTENANCE PRACTICES AND MUST HAVE READ AND UNDERSTOOD THE SAFETY INSTRUCTIONS CONTAINED IN THIS MANUAL BEFORE CARRYING OUT ANY MAINTENANCE.

Operating environment

Temperature

The Refrigerator must be used in a clean, well-lit environment with a stable temperature of approximately 5°C to 35°C.

Relative humidity

The Refrigerator must be used in an environment with a relative humidity between 20% to 80% (non-condensing).

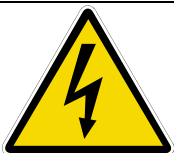
Symbols and decals

Personnel must be familiar with all the warning symbols and decals fitted to the Refrigerator. Failure to recognise a warning and read the associated safety instructions may result in injury or death.



THIS DECAL IS USED TO INDICATE AN ELECTRICAL HAZARD. THE REFRIGERATOR MUST BE DISCONNECTED FROM THE MAINS ELECTRICAL POWER SUPPLY WHEN THIS DECAL IS ENCOUNTERED DURING INSTALLATION AND MAINTENANCE.

Electrical hazard



WARNING!

THE REFRIGERATOR MUST BE DISCONNECTED FROM THE MAINS ELECTRICAL POWER SUPPLY WHEN THIS DECAL IS ENCOUNTERED DURING INSTALLATION, MAINTENANCE OR SETTING-UP.

Electro-static discharge (ESD)

CAUTION! Precautions against ESD must be taken to prevent damage to the Refrigerator control circuits:

- (1) Ensure that the operating environment is protected against ESD.
- (2) Do not touch electronic circuits or wafers.
- (3) Always use a grounded wrist strap while handling electronic circuits.

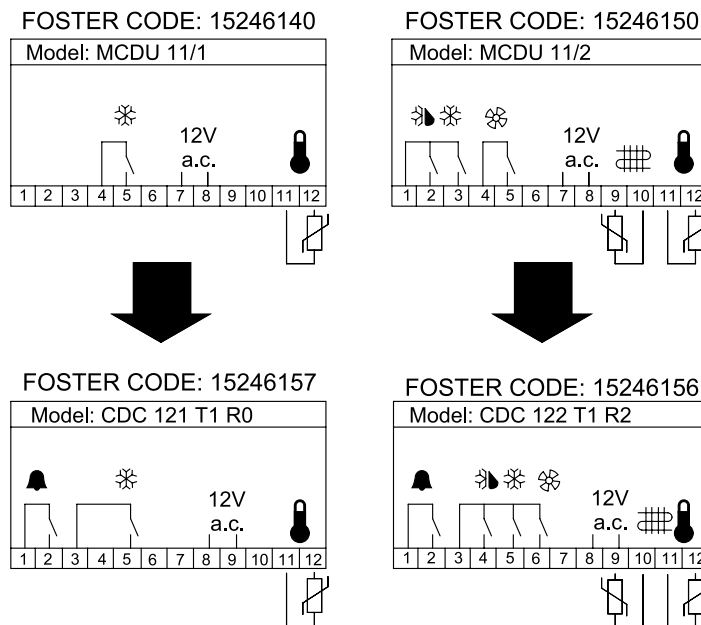
1. Electrical Connections

Replacing MCDU11/1 with CD121T1R0

- Move live supply from MCD terminal 4 to CDC terminal 3
- Move compressor output from MCD terminal 5 to CDC terminal 5
- Move 12 V a.c. supply from MCD terminals 7 & 8 to CDC terminals 8 & 9
- Move air probe wires from MCD terminals 11 & 12 to CDC terminals 11 & 12

Replacing MCDU11/2 with CDC122T1R2

- Remove link between MCD terminals 1 & 4
- Move live supply from MCD terminal 1 to CDC terminal 3
- Move defrost output from MCD terminal 2 to CDC terminal 4
- Move compressor output from MCD terminal 5 to CDC terminal 5
- Move fan output from MCD terminal 3 to CDC terminal 6
- Move 12 V a.c. supply from MCD terminals 7 & 8 to CDC terminals 8 & 9
- Move evaporator probe wires from MCD terminal 9 & 10 to CDC terminals 10 & 11
- Move air probe wires from MCD terminals 11 & 12 to CDC terminals 11 & 12

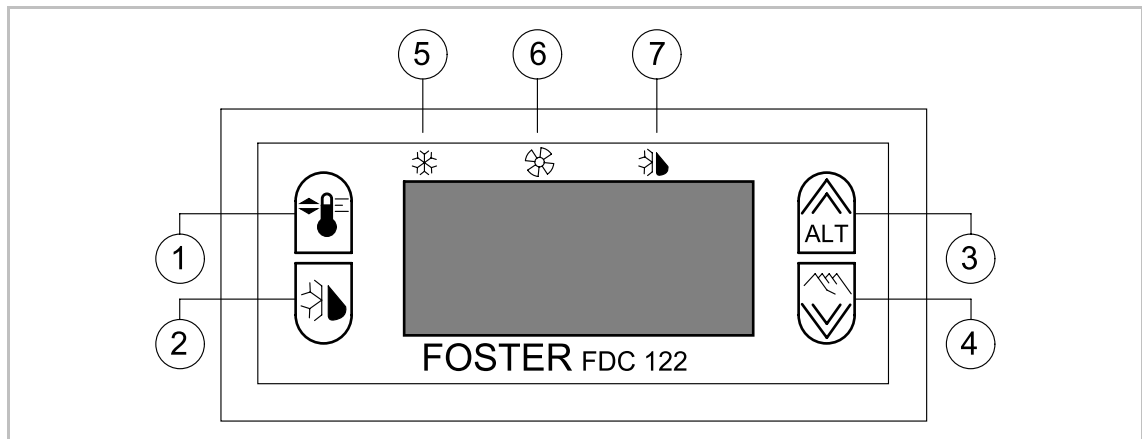


2. FDC 121 and FDC 122 - microprocessor controls

2.1 The microprocessor controller - FDC 121 (15246141) and FDC 122 (15246151)

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.





Check set point - Low point of temperature band.

- Press button 1 ()

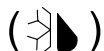

Increase set point

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




Decrease set point

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

Manual defrost

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

Indicators

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

Adjustment parameters

Refrigerator	Freezer	Meat/Chill	Fish
+1/+5	-25/-15	-3/+3	-1/+3
Factory setting			
+1/+4	-18 to -21	-2 to +3	-1/+1

3. FDC 121 and FDC 122 - thermostat function

3.1 Thermostat function - FDC 121 and FDC 122

- **SPL** Minimum set point (°C).
Maximum allowable low alarm setting (°C).
- **SPh** Maximum set point (°C).
Maximum allowable high alarm setting (°C).
- **hyS** Temperature hysteresis (°K).
- **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).

3.2 Defrost function

- **drE** Time between defrosts (hrs).
- **dLI** Defrosts termination temperature (°C).
- **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 fails below the value setpoint + hysteresis.
 - 1..30 (mins)** = dEF is displayed during defrost and until the set time has elapsed after defrosting or until airtemperature fails 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 0°C, 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.

3.3 Evaporator fan control

- **Fct** Evaporator fan control during cooling
 - 01** = continuous operation.
 - 00** = cycle on/off with compressor.
 - 1..00 (mins)** = start with compressor, set time delay stop after compressor.
- **Frs** Fan delay temperature following defrost (°C)
- **Fid** Evaporator fan operation during defrost:-
 - 00** = off until fan delay temperature **FrS** (°C) is reached.
 - 01** = on while evaporator temperature is below valve **FrS** (°C).
 - 02** = on during defrost.

3.4 Alarm function















- **Alo** Low temperature alarm setting (°C).
- **Ahl** High temperature alarm setting (°C).
- **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)

3.5 Thermal mass simulation

- **oSi** Thermostat (Air probe) offset (°K).
- **oS2** Evaporator probe offset (°K).
- **oS3** Display offset (°K). - 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 air temperature.
 - 00** = instantaneous in temperature display.
 - 01..200** = thermal mass simulation.
- **Adr** Controller peripheral number - only used where controllers are networked.

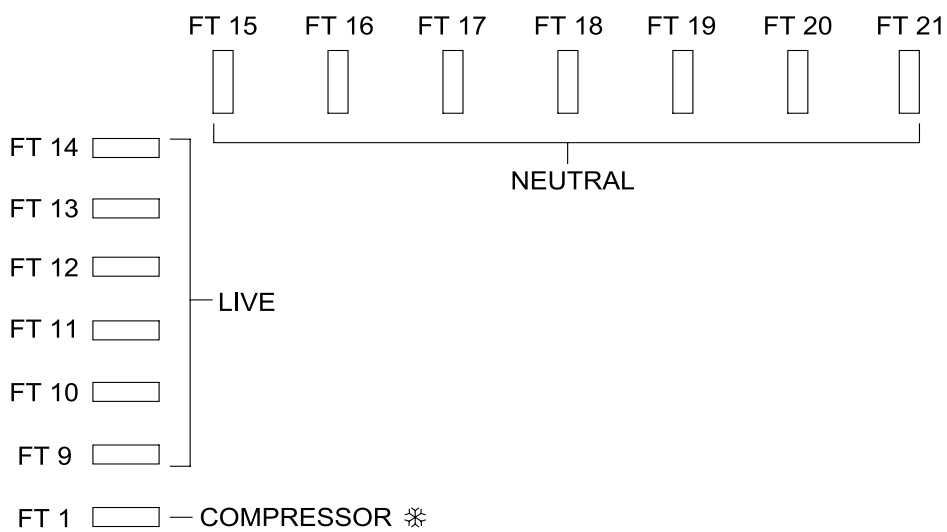
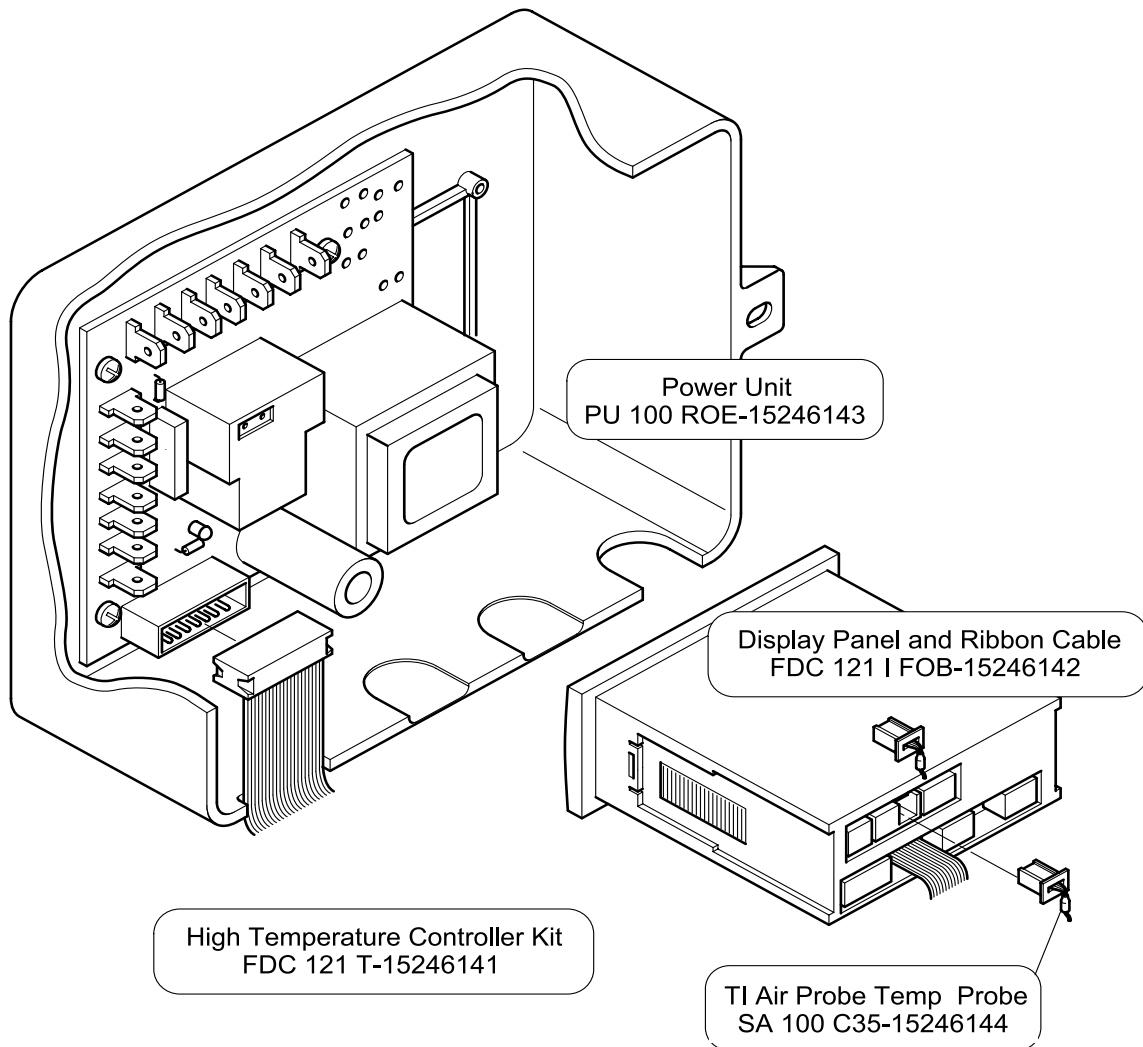
4. FDC 121 and FDC 122 -display

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 measure by probe 1.

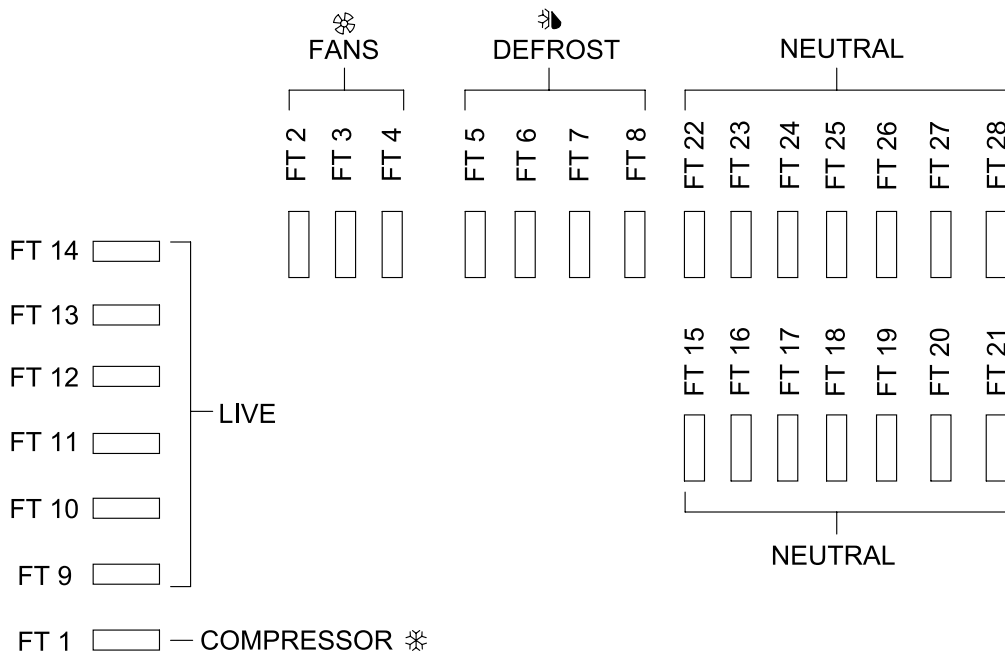
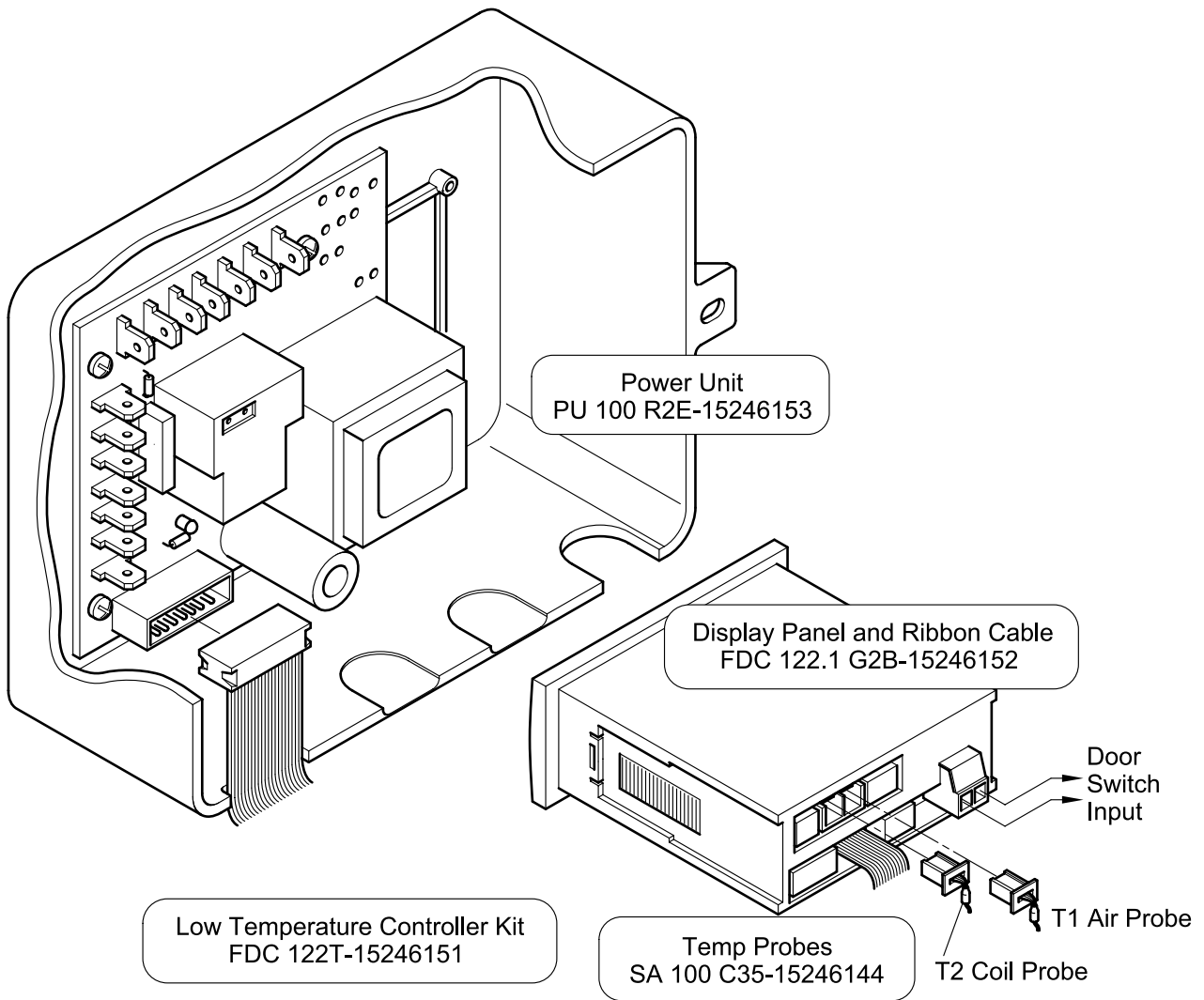
1. The coil temperature measured by probe 2 may be viewed by pressing  
2. Access to the control parameters is achieved by pressing in sequence:
 +   +  and holding down the keys for a period of 4 seconds.
3. It is possible to scroll through the parameters by pressing:
 or 
4. The value of the selected parameter is checked by pressing:
  and may be altered by pressing at the same time:
   
5. Exit from setup occurs after 10 seconds if no key is pressed.

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 air temperature while the alarm condition persists. The alarm will also re-sound every 30 seconds while an alarm condition persists.

5. FDC 121 T – Controller kit and connections



6. FDC 122 T – Controller kit and connections



SETTINGS FOR LOW TEMPERATURE CABINETS

CONTROLLER FITTED:- FDC 122 COMPLETE WITH TWO PROBES (AIR PROBE & EVAP. PROBE)

Par. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	Min. Setpoint	Max Setpoint	Temp hysteresis	Comp min time off	Comp min time on	Comp duty cycle at PF	Comp start delay	Defrost interval	Defrost end temp	Defrost duration	Drain down time	Disp. during defrost	Defrost type	Defrost optimisation	Evap fan control	Fan delay temp	Fan operation	Low alarm set	High alarm set	Alarm delay	Air probe	Air probe offset	Evap probe offset	Display Offset	Thermal mass simulation	DO NOT CHANGE	
Mnemonic	SPL	SPH	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	-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	
GASTRO PRO CABINETS PREFIXED WITH PRO -																											
500 MT, 600MT,	-3	2	2	00	00	6	00	6	30	5	2	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
1130 MT, 1350 MT,	-3	2	2	00	00	6	00	6	30	5	2	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
1/1 M, 1/2M, 1/3M, 1/4. M	-3	2	2	00	00	6	00	6	30	5	2	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
2/1 M, 2/2M, 2/3M, 2/4, M	-3	2	2	00	00	6	00	6	30	5	2	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
500 MTR, 600 MTR,	-3	2	2	00	00	6	00	6	10	10	2	00	ELE	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
500 CT, 600CT,	00	3	2	00	00	6	00	6	30	5	2	00	GAS	con	-1	-2	00	-1	8	60	1	00	00	00	00	1	
1/30 CT, 1350 CT,	00	3	2	00	00	6	00	6	30	5	2	00	GAS	con	-1	-2	00	-1	8	60	1	00	00	00	00	1	
500 LT, 600 LT,	-23	-15	3	00	00	6	00	6	30	10	3	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
1130 LT, 1350 LT.	-23	-15	3	00	00	6	00	6	30	10	3	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
11/L, 1/2L, 1/3L, 1/4L,	-23	-15	3	00	00	6	00	6	30	10	3	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
2/1 L, 2/2L, 2/3L, 2/4L,	-23	-15	3	00	00	6	00	6	30	10	3	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
500 LTR, 600 LTR,	-23	-15	3	00	00	6	00	6	25	15	3	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
1130 LTR, 1350 LTR,	-23	-15	3	00	00	6	00	6	25	15	3	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PUBLIC SECTOR CABINETS																											
PS 110 LU,	-21	-15	3	00	00	6	00	8	30	20	3	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PS 220 LU,	-21	-15	3	00	00	6	00	6	20	8	3	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PS 400 LU,	-21	-15	3	00	00	6	00	6	20	20	1	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PS 900 LU,	-21	-15	3	00	00	6	00	6	25	20	3	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PS 500 LT, PS 600 LT,	-21	-15	3	00	00	6	00	6	30	8	1	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PS 1130 LT, PS 1350 LT,	-21	-15	3	00	00	6	00	6	30	8	1	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PS 2901290 HLT (LOW),	-21	-15	3	00	00	6	00	6	20	15	1	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PS 220 MU.	-3	2	2	00	00	6	00	6	25	8	1	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
PS 400 MU, PS 900 MU,	-3	2	2	00	00	6	00	6	20	10	1	00	ELE	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
PS 500 MT, PS 600 MT,	-3	2	2	00	00	6	00	6	30	5	1	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
PS 1130 MT, PS 1350 MT,	-3	2	2	00	00	6	00	6	30	5	1	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
PS 220 CU	00	3	2	00	00	6	00	6	25	8	1	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
PS 400 CU, PS 900 CU,	00	3	2	00	00	6	00	6	20	10	1	00	ELE	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
PS 500 CT, PS 600 CT,	00	3	2	00	00	6	00	6	30	5	1	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
PS 1130 CT, PS 1350 CT,	00	3	2	00	00	6	00	6	30	5	1	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	

SETTINGS FOR LOW TEMPERATURE CABINETS

CONTROLLER FITTED:- FDC 122 COMPLETE WITH TWO PROBES (AIR PROBE & EVAP. PROBE)

Par. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	Min. Setpoint	Max. Setpoint	Temp hysteresis	Comp min time off	Comp min time on	Comp duty cycle at PF	Comp start delay	Defrost interval	Defrost end temp	Defrost duration	Drain down time	Disp. during defrost	Defrost type	Defrost optimisation	Evap fan control	Fan delay temp	Fan operation	Low alarm set	High alarm set	Alarm delay	Air probe	Air probe offset	Evap probe offset	Display Offset	Thermal mass simulation	DO NOT CHANGE	
Mnemonic	SPL	SPH	hYS	coF	con	cdc	crs	drE	dLI	dto	drP	diS	dtY	dxaoP	Fct	FrS	FID	ALo	Ahi	AdL	Ain	oS1	oS2	oS3	SiM	Adr	
Std. Setting	-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	
MAXIMA CABINETS PREFIXED WITH 'LR'																											
400 ADU (G),	-23	-15	3	00	00	6	00	6	20	20	1	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
900 ADU,	-23	-15	3	00	00	6	00	6	25	20	1	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
110 U,	-23	-15	3	00	00	6	00	8	30	20	3	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
220 U,	-23	-15	3	00	00	6	00	6	20	8	3	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PREFIXED WITH 'HR'																											
220 ADUMC,	-3	2	2	00	00	6	00	6	25	8	1	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
110 ADUMC,	-3	2	2	00	00	6	00	8	7	20	3	00	ELE	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
400 ADUMC, 900 ADUMC,	-3	2	2	00	00	6	00	6	20	10	1	00	ELE	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
SOLO PLUS W & C MODELS 50 TO 200																											
M' RANGE,	-3	00	2	00	00	6	00	6	30	6	2	00	GAS	con	-1	-5	00	-3	5	60	1	00	00	00	00	1	
C' RANGE,	-3	00	2	00	00	6	00	6	30	6	2	00	GAS	con	-1	-2	00	-3	5	60	1	00	00	00	00	1	
L' RANGE (-21),	-23	-15	3	00	00	6	00	6	30	10	3	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
L' RANGE (-27),	-28	-15	2	00	00	6	00	6	30	12	3	00	GAS	con	-1	-5	00	-30	-10	60	1	00	00	00	00	1	
COMPAKT 300 RANGE 410 TO 1010																											
L' MODELS,	-23	-15	3	00	00	6	00	6	20	8	2	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
M' MODELS,	-3	2	3	00	00	6	00	6	20	8	2	00	GAS	con	-1	-2	00	-3	-5	60	1	00	00	00	00	1	
BAKERY STORAGE FREEZER CABINETS PREFIXED (C)BSH & HBF																											
20 ADT, 40 ADT,	-23	-15	3	00	00	6	00	6	30	8	1	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
34 ADT/2,	-25	-10	2	3	2	6	00	6	10	20	5	00	GAS	con	-1	-10	00	-28	-5	60	1	00	00	00	00	1	
CBSF 34 ADT,	-23	-10	2	3	00	6	00	12	10	20	5	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
DOUGH RETARDER COUNTERS																											
DR 16 VE, DR 24 VE	-5	3	2	00	00	6	00	6	30	5	1	00	GAS	con	-1	0	00	-10	8	60	1	00	00	00	00	1	
DR 20 VT, DR 40 VT	-5	3	2	00	00	6	00	6	25	8	1	00	GAS	con	-1	-2	00	-6	8	60	1	00	00	00	00	1	
BAKERY FREEZER COUTNER & REMOTE																											
BSCF 16 ADE	-23	-15	3	00	00	6	00	6	15	12	1	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
BSCF 24 ADE	-23	-15	3	00	00	00	00	6	15	12	1	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
BAKERY FAST FREEZER																											
CBFF 34T/2, BFF 34T/2	-25	-15	3	00	00	6	00	12	25	25	5	00	ELE	Con	-1	-5	00	-35	-10	60	1	00	00	00	00	1	
CBFF 34 RIT, BFF 34 RIT	-25	-15	3	00	00	6	00	6	10	45	5	00	ELE	Acc	-1	-5	00	-35	-10	60	1	00	00	00	00	1	

SETTINGS FOR LOW TEMPERATURE CABINETS

CONTROLLER FITTED:- FDC 122 COMPLETE WITH TWO PROBES (AIR PROBE & EVAP. PROBE)

Par. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	Min. Setpoint	Max. Setpoint	Temp hysteresis	Comp min time off	Comp min time on	Comp duty cycle at PF	Comp start delay	Defrost interval	Defrost end temp	Defrost duration	Drain down time	Disp. during defrost	Defrost type	Defrost optimisation	Evap fan control	Fan delay temp	Fan operation	Low alarm set	High alarm set	Alarm delay	Air probe	Air probe offset	Evap probe offset	Display Offset	Thermal mass simulation	DO NOT CHANGE	
Mnemonic	SPL	SPH	hYS	coF	con	cdc	crs	drE	dLI	dto	drP	diS	dtY	dxaoP	Fct	FrS	FiD	ALo	Ahi	AdL	Ain	oS1	oS2	oS3	SiM	Adr	
Std. Setting	-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	
PATISSERIE FREEZER CABINETS																											
HBT 12T	-25	-10	2	3	2	6	00	12	20	20	5	00	GAS	con	-1	-5	00	-28	-5	60	1	00	00	00	00	00	1
HBT 34T	-25	-10	2	3	2	6	00	12	20	20	5	00	GAS	con	-1	-10	00	-28	-5	60	1	00	00	00	00	00	1
PATL 12T	-25	-10	2	3	00	6	00	8	30	20	5	5	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	1	
PATISSERIE CABINETS																											
HSK 12T	00	10	2	3	2	6	00	12	10	30	1	00	FAN	con	-1	5	2	-1	12	60	1	00	00	00	00	00	1
PATH 12T	00	10	2	3	00	6	00	12	10	30	1	00	ELE	con	-1	00	00	00	8	60	1	00	00	00	00	00	1
BAKOLINE FORCED AIR PATISSERIE FREEZER																											
HLF 64	-25	-10	2	3	2	6	00	12	10	20	5	00	GAS	con	-1	-5	00	-28	-5	60	1	00	00	00	00	00	1
HLF 6347	-25	-10	2	3	2	6	00	12	10	40	5	00	ELE	con	-1	-10	00	-28	-10	60	1	00	00	00	00	00	1
BAKOLINE STATIC COIL FREEZER																											
TGS 64	-25	-10	3	3	2	6	00	12	10	20	5	00	GAS	con	-1	-5	00	-28	10	120	1	00	00	00	00	00	1
BAKOLINE FAST FREEZER																											
BHS 86	-25	-10	3	3	2	6	00	12	10	45	5	00	GAS	con	-1	-10	00	-35	-5	60	1	00	00	00	00	00	1
UNDER BOILER COUNTER																											
UBC 2/2 M	-3	-1	2	00	00	6	00	6	30	5	1	00	GAS	con	-1	0	00	-3	5	60	1	00	00	00	00	00	1
SLIMLINE STORAGE FREEZER																											
LR & LHR 125 ADU	-23	-15	3	00	00	6	00	6	25	10	1	00	GAS	con	-1	-5	00	-25	-10	60	1	00	00	00	00	00	1
LR & LHR 301 ADU	-23	-15	3	00	00	6	00	6	15	8	1	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	00	1
SERVICE MASTER CABINET																											
SMU 315	1	5	3	00	00	6	00	6	30	8	1	00	GAS	con	-1	16	00	00	10	60	1	4	00	4	00	00	1
PREP COUNTER TOP DISPLAY SYSTEM																											
PC 1/2 ERTH	3	5	2	00	00	6	00	6	15	8	1	00	GAS	con	-1	00	00	2	10	60	1	00	00	00	00	00	1
PC 1/2 ADMERTH	3	5	2	00	00	6	00	6	15	8	1	00	GAS	con	-1	00	00	2	10	60	1	00	00	00	00	00	1
PC 1/2 ADERTH	3	5	2	00	00	6	00	6	15	8	1	00	GAS	con	-1	00	00	2	10	60	1	00	00	00	00	00	1
PMC 1-5, HFT, HRT	0	5	3	00	00	6	00	6	30	15	1	00	GAS	con	-1	1	00	0	10	60	1	00	00	00	00	00	1
S400-L & S600-L	-23	-15	3	00	00	6	00	6	20	20	2	00	ELE	con	-1	-5	00	-25	-10	60	1	00	00	00	00	00	1

SETTINGS FOR LOW TEMPERATURE CABINETS

CONTROLLER FITTED:- FDC 122 COMPLETE WITH TWO PROBES (AIR PROBE & EVAP. PROBE)

Par. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	Min. Setpoint	Max. Setpoint	Temp hysteresis	Comp min time off	Comp min time on	Comp duty cycle at PF	Comp start delay	Defrost interval	Defrost end temp	Defrost duration	Drain down time	Disp. during defrost	Defrost type	Defrost optimisation	Evap fan control	Fan delay temp	Fan operation	Low alarm set	High alarm set	Alarm delay	Air probe	Air probe offset	Evap probe offset	Display Offset	Thermal mass simulation	DO NOT CHANGE	
Mnemonic	SPL	SPH	hYS	coF	con	cdc	crs	drE	dLI	dto	drP	diS	dtY	dxaoP	Fct	FrS	FID	ALo	Ahi	AdL	Ain	oS1	oS2	oS3	SiM	Adr	
Std. Setting	-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	
ICE CREAM FREEZER CABINET WITH GLASS DOOR																											
ICF 450 ADUG	-28	-20	2	00	00	6	00	6	15	15	3	00	ELE	CON	-1	-5	00	20	-30	60	1	00	00	00	00	00	1
LOCKHART ARTIC CABINETS & COUNTERS																											
HE 3223, HE 3224	-23	-15	3	00	00	5	00	6	30	8	1	5	GAS	CON	-1	-5	00	-25	-15	60	1	00	00	00	00	00	1

SETTINGS FOR LOW TEMPERATURE CABINETS

CONTROLLER FITTED:- FDC 121 COMPLETE WITH ONE PROBES (AIR PROBE)

Par. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	Min. Setpoint	Max. Setpoint	Temp hysteresis	Comp min time off	Comp min time on	Comp duty cycle at PF	Comp Start delay	Defrost interval	Defrost end temp	Defrost duration	Drain down time	Disp. during defrost	Defrost type	Defrost optimisation	Evap fan control	Fan delay temp	Fan operation	Low alarm set	High alarm set	Alarm delay	Air probe	Air probe offset	Evap probe offset	Display Offset	Thermal mass simulation	DO NOT CHANGE	
Mnemonic	SPL	SPH	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	1	5	3	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
S400-H & S600-H	2	5	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
ALL CABINETS WITH PREFIX OF PRO																											
500 HT-G, 600HT-G	3	8	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
1130HT-G, 1350HT-G	3	8	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
500HTR-Q 600HTR-G	3	8	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
1130HTR-Q 1350HTR-G	3	8	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
1/1H, 1/2H, 1/3H, 1/4H	3	8	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
2/1H, 2/2H, 2/3H, 2/4H	3	8	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
500WTG, 600WTG	5	17	2	00	00	6	00	6	30	5	1	00	FAN	con	-1	-5	2	4	20	30	1	00	00	00	00	1	
MAXIMA CABINETS PREFIX HR																											
110U, 220U, 400U, 900U	2	-5	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
400UG, 900UG	2	5	2		00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
220UF, 400UF	-1	1	2	00	00	6	00	12	30	15	1	00	FAN	con	-1	-5	2	-3	5	90	1	00	00	00	00	1	
400UWG	5	17	2	00	00	6	00	6	30	5	1	00	FAN	con	-1	-5	2	4	20	30	1	00	00	00	00	1	
SLIMLINE STORAGE CABINET																											
HR125U	2	5	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
BARMASTERS																											
2EA/D, 3EA/D, 4EA/D	6	10	4	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	4	16	30	1	00	00	00	00	1	
DUET SPLIT SYSTEMS																											
ALL H MODELS	1	10	3	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	-2	12	60	1	00	00	00	00	1	
COMPAKT 300 RANGE - 410' TO '1010'																											
ALL H MODELS	1	5	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	60	1	00	00	00	00	1	
PUBLIC SECTOR PREFIXED WITH 'PS'																											
ALL 'H' MODELS	1	5	3	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
SOLO PLUS MODELS CEILING & WALL MOUNT - '50' TO '200'																											
ALL 'H' MODELS	1	5	3	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
ALL WINE MODELS	5	17	2	00	00	6	00	6	30	5	1	00	FAN	con	-1	-5	2	4	20	30	1	00	00	00	00	1	
LOCKHART ARTICA CABINET & COUNTER RANGE PREFIXED WITH 'HE'																											
3221, 3222, 3225, 3226	3	8	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	

SETTINGS FOR HIGH TEMPERATURE CABINETS

CONTROLLER FITTED:- FDC 121 COMPLETE WITH ONE PROBES (AIR PROBE)

Par. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	Min. Setpoint	Max. Setpoint	Temp hysteresis	Comp min time off	Comp min time on	Comp duty cycle at PF	Comp start delay	Defrost interval	Defrost end temp	Defrost duration	Drain down time	Disp. during defrost	Defrost type	Defrost optimisation	Evap fan control	Fan delay temp	Fan operation	Low alarm set	High alarm set	Alarm delay	Air probe	Air probe offset	Evap probe offset	Display Offset	Thermal mass simulation	DO NOT CHANGE	
Mnemonic	SPL	SPH	hYS	coF	con	cdc	crs	drE	dLI	dto	drP	diS	dtY	dxaoP	Fct	FrS	FID	ALo	Ahi	AdL	Ain	OS1	oS2	oS3	SiM	Adr	
Std. Setting	1	5	3	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
PIZZA HUT CABINETS																											
PTPR RI 1T (PROVE)	28	35	4	00	00	6	00	24	30	1	1	00	FAN	con	-1	-5	2	-1	45	30	1	00	00	00	00	1	
PRPT-RI-1T (THAW/RET)	2	4	3	00	00	6	00	24	30	1	1	00	FAN	con	-1	-5	2	-1	45	30	1	00	00	00	00	1	
PIZZA HUT MAKE TABLE COUNTER																											
PM-3ERT	3	5	2	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
ROLL IN CABINETS																											
R160 1T	1	5	3	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
R160 1T/G	1	5	3	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
R1135 1T	1	5	3	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
MRI-1-H(P), MRI-2-H(P)	1	5	3	00	00	6	00	6	30	15	1	00	FAN	con	-1	-5	2	00	10	30	1	00	00	00	00	1	
SHOP LINE CABINET																											
SL 46 S	0	10	2	3	2	6	00	12	10	30	1	00	FAN	con	-1	5	2	-1	12	60	1	00	00	00	00	1	
BAKERY CABINET																											
HSK 34 T	1	5	3	00	00	6	00	6	30	15	5	00	FAN	con	-1	-5	2	00	10	60	1	00	00	00	00	1	
BSR 20 T	1	5	3	00	00	6	00	6	30	15	5	00	FAN	con	-1	-5	2	00	10	60	1	00	00	00	00	1	
BSR 40 T	1	5	3	00	00	6	00	6	30	15	5	00	FAN	con	-1	-5	2	00	10	60	1	00	00	00	00	1	