

CHI Freezing Equipment
Maherry Packing Inc.
Tunnel Freezer
Control Panel
Documentation Package

Mountlake Terrace, WA
PO # 910236338
February 2, 2001

Integrated Controls, Inc.
Everett, WA
(425) 342-7707

ICI

Integrated Controls, Inc.

Maberry Packing Tunnel Freezer



Integrated Controls, Inc.

*CBi Freezing Equipment
Maberry Packing Inc.
Tunnel Freezer
Control Panel
Documentation Package*

Mountlake Terrace, WA

*PO # 5940-8636K
February 8, 2001*

*Integrated Controls, Inc.
Everett, WA
(425) 347-7707*

SEQUENCE OF OPERATION
TO START REFRIGERATION EQUIPMENT
MABERRY PACKING, LYNDEN, WA

1. Turn tunnel on (fans, conveyors, solenoids).
2. Verify that water fill valve to cooling tower is *open* and that the tower is full of water.
3. On cooling tower control panel:
 - a. Turn spray pump switch from off to *auto*. Verify pump operation.
 - b. Turn fan control switch from off to *hand* and verify that fan comes on; then turn switch from hand to *auto*.
4. Verify that fluid is flowing through plastic line to drain.
5. Start the compressor:
 - a. Push the *local start* button on the compressor panel.
 - b. Push the *auto* button on the compressor panel.
6. On LPR control panel, turn disconnect switch from off to *on*.
7. Observe fluid level percentage on electronic display of LPR package. Level should be between 15-20%. Wait until level reaches this percentage, then go to step 8.
8. On LPR control panel, turn liquid feed pump switch from off to *auto* (only one pump at a time, alternate weekly).

COMMERCIAL
INDUSTRIAL

MECHANICAL CONTRACTORS

PROCEDURE OF OPERATION OPERATION EQUIPMENT OFF PACKING, LYNDEN, WA

turn liquid feed pump switch from auto to *off*.

Hit button on compressor control panel.

Adjust capacity on compressor control panel display is
Hit button on compressor control panel.

Hit button on disconnect switch from on to *off*.

Hit button on control panel:

Hit button on disconnect switch from auto to *off*.

Hit button on disconnect switch from auto to *off*.

Hit button on disconnect switch from auto to *off*.

- Hit start tunnel
- " " belts (Make sure they are running)
- turn fans from off to auto (zone control) scroll through each zone
- turn thumpers to auto (make sure they are running)
- Go turn refrigeration on
- Take Sequence of operation with you
- Come back and make sure all fans are on.
- Go back after 20 minutes to make sure refrigeration is working.

TCP Screens

Device Cut Sheets

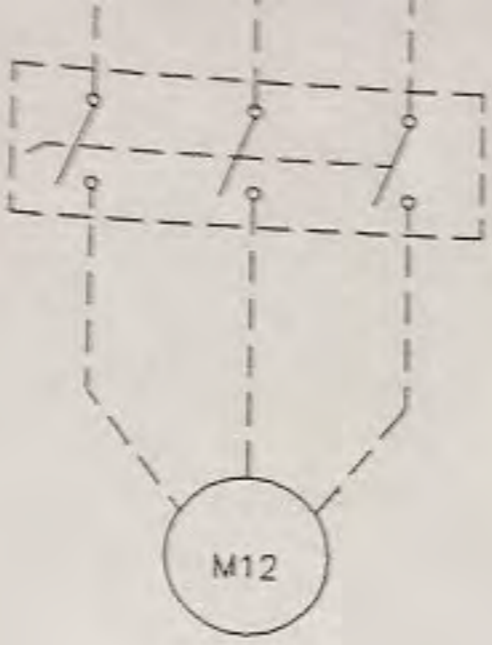
Schematics

Functional Description

Program Listing


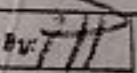
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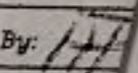
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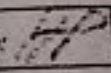


DISC12

FREEZER DRIVE 2
2HP
3.4FLA

<table border="1"> <thead> <tr> <th>Date</th> <th>By</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Date	By							 Integrated Controls, Inc. 2615 W. Casino Rd., Suite 4A Everett, WA 98204	Cloudy & Britton Mountlake Terrace, WA Maberry Tunnel Freezer Controller	Drawn By: LCN	Checked By: 	Sheet
	Date	By											
Scale: None	Date: 01/24/01	7											
Assigned ICI Project Number: J010040													
Sheet Title: Power Distribution			CAD File Name: \CAD01\J010040\P071004A.DWG										

Integrated Controls, Inc. Rd., Suite 4A 98204	Cloudy & Britton Mountlake Terrace, WA Maberry Tunnel Freezer Controller	Drawn By: lcn	Checked By: 
		Scale: None	Date: 01/24/01
		Assigned ICI Project Number: J01	
		Sheet Title: Power Distribution	

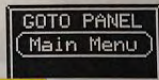
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Number: J010040	
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Thumper Control



ALARM

ALARM



Thumper
Drive 2

50-55%

Needs to be on Auto

Defrost Sequence

1	2	3	4	5
1 0	1 0	1 0	1 0	1 0
█	█	█	█	█

Current
Freezer
In
Defrost

1



ALARM



MaberryC

PANEL: Belt Calibration

Belt Calibration Screen

Section 1
Tunnel
Length in
Feet

123

Section 2
Tunnel
Length in
Feet

123

ALARM

Freezer
Belt #1
Speed
Ff/Min

123

Freezer
Belt #2
Speed
Ff/Min

123

ALARM

GOTO
Main
Menu

Sec. 1/6 Sec. 2 (24)

Freezer
belt 8 Belt #2 (4)

(Belt
Access +
Thermapack)

Belt Control



Overview Selection

Freezer 1 Fan Failure
Freezer 2 Fan Failure
Freezer 3 Fan Failure
Freezer 4 Fan Failure
Freezer 5 Fan Failure
Freezer 6 Fan Failure
Freezer 7 Fan Failure
Freezer 8 Fan Failure
Freezer 9 Fan Failure
Freezer 10 Fan Failure

GOTO PANEL
Freezer
Overview

GOTO PANEL
Freezer
Control
Overview

ALARM

ALARM

GOTO
Main
Menu

MaberryC

PANEL: Alarms 2

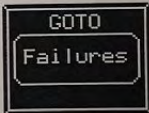
Fan Failures

Freezer 1 Fan Failure
Freezer 2 Fan Failure
Freezer 3 Fan Failure
Freezer 4 Fan Failure
Freezer 5 Fan Failure
Freezer 6 Fan Failure
Freezer 7 Fan Failure
Freezer 8 Fan Failure
Freezer 9 Fan Failure
Freezer 10 Fan Failure

Thumper 1 Failure
Thumper 2 Failure
Thumper 3 Failure
Thumper 4 Failure
Thumper 5 Failure



Alarm
Reset



GOTO
Failures



GOTO
Main
Menu

Failures

Freezer Drive #1 Start Failure Emergency Stop

Freezer Drive #2 Start Failure

Freezer Drive #1 Run Failure

Freezer Drive #2 Run Failure

Thumper Drive Start Failure

Thumper Drive Run Failure

Alarm
Reset

GOTO
Fan
Failures

GOTO
Main
Menu

Freezer 8 Device Controls



Freezer 8
Fan OFF



Freezer 8
Valve Open

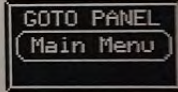


Freezer 8
Liquid OFF

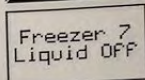
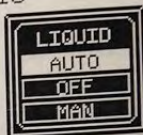
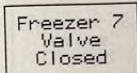
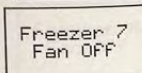


ALARM

ALARM

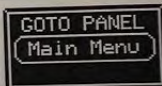


Freezer 7 Device Controls



ALARM

ALARM



MaberryC

PANEL: System Overview 2

System Overview

	1	2	3	4	5	6	7	8	9	10	Freezer Belt#1	Freezer Belt #2
FANS												
	A	A	A	A	A	A	A	A	A	A	A	A
LIQ												
	A	A	A	A	A	A	A	A	A	A	A	A
DEF VLV												
	A	A	A	A	A	A	A	A	A	A		

GOTO
Back

ALARM

ALARM

GOTO
Main
Menu

Freezer Control Overview

Freezer 1	Freezer 4	Freezer 7	Freezer 9
Manual Run Def Auto	Manual Run Def Auto	Manual Run Def Auto	Manual Run Def Auto

Freezer 2	Freezer 5	Freezer 8	Freezer 10
Manual Run Def Auto	Manual Run Def Auto	Manual Run Def Auto	Manual Run Def Auto

Freezer 3	Freezer 6
Manual Run Def Auto	Manual Run Def Auto

ALARM

GOTO
Back

ALARM

GOTO PANEL
Main Menu

Drive Control

Freezer Drive #1
AUTO
OFF
MAN

Set Freezer Drive #1 Speed %
1234

Freezer Section 1 Freeze Time Mins.
123.12

Freezer Drive #2
AUTO
OFF
MAN

Set Freezer Drive #2 Speed %
1234

Freezer Section 2 Freeze Time Mins.
123.12

ALARM

ALARM

GOTO PANEL
Main Menu

Drive 1 Time min.
 35-40% 5.00 ±

Drive 2 85-90% 7.00 ±

CBI FREEZING EQUIPMENT

MAIN MENU

Conveyor #1 OFF

ALARM

Conveyor #2
Running

Start
Tunnel

Start
Belts

GOTO
Alarms

GOTO PANEL
Drive
Speed

GOTO PANEL
Overview
Select

GOTO PANEL
Belt
Access &
Thumpers

GOTO PANEL
Defrost
Selections

GOTO PANEL
Zone
Control
Selection

GOTO PANEL
System
Control

Defrost Control Screen

Enter
Number of
Sequence
Steps

1234

Sequence
Step to
Modify
Number

12

Zone To
Place In
Manual
Defrost

12

GOTO PANEL

Set STEP
& START
Times

Enter
Freezer
Number

12

Sequence
Step

1234

Select
Defrost
On

Start
Manual
Defrost

ALARM

ALARM

GOTO

View

GOTO

Main
Menu

Sequence Steps
1

Freezer Number
1 or 2 etc.

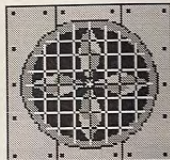
Hit select
Defrost
on

Will turn
white

Belt Washer / Dryer



Solenoid
OFF

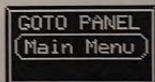


Fan OFF



ALARM

ALARM



Current Defrost Times

Pump Down
Time
1234

Spin Down
Time
1234

Defrost
Time
1234

Drain Time
1234

Cool Down
Time
1234

Next
Defrost
Step Delay
Time
1234

Current Current
Zone Step

5

4

ALARM

ALARM

GOTO
Main
Menu

Pump Down
Time
3min.

Spin Down
Time
1min

Defrost
Time
6min.

Drain Time
4min

Cool Down
Time
4min.

Next
Defrost
Step Delay
Time
5min

System Timers Control

Enter Fans
Start
Delay Time
1234

Fan Start
Delay Time
1234

Enter
Liquid Sol
Seq. Delay
Time
1234

Liq. Sol.
Seq. Delay
Time
1234

Enter Fan
Seq On
Delay Time
1234

Fan Seq On
Delay Time
1234

Enter Pump
Down Delay
Time
1234

Pump Down
Delay Time
1234

GOTO
Main Menu

Enter Fans
Start
Delay Time
(60)

Fan Start
Delay Time
(0)

(System Control
Setup System
Timers)

Enter
Liquid Sol.
Seq. Delay
Time (30)

Liq. Sol.
Seq. Delay
Time (10)

Enter Fan
Seq On
Delay Time
(30)

Fan Seq On
Delay Time
(10)

Enter Pump
Down Delay
Time
(10)

Pump Down
Delay Time
(45)



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RED RASPBERRIES

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