OPERATOR'S MANUAL

This manual provides information on installation, operating, maintenance, trouble shooting & replacement parts for



Refrigerated Solutions with FlexiCold Technology

FX-1

2N1 – TWO COOLING SYSTEMS IN ONE Refrigerator (40 °F) • Freezer (-5 °F)

• Or anywhere in between (-5° to 40°F)

FX1-4N1

4N1 - FOUR COOLING SYSTEMS IN ONE

- Refrigerator (40°F)
- Freezer (-5°F)
- Or anywhere in between (-5° to 40°F)
- Rapid Chiller for on-demand blast chilling

• Safety Thaw for on-demand thawing of frozen food safely



NOTIFY CARRIER OF DAMAGE AT ONCE.

It is the responsibility of the consignee to inspect the container upon receipt of same and to determine the possibility of any damage, including concealed damage. Randell suggests that if you are suspicious of damage to make a notation on the delivery receipt. It will be the responsibility of the consignee to file a claim with the carrier. We recommend that you do so at once.

Manufacture Service/Questions 888-994-7636.

Information contained in this document is known to be current and accurate at the time of printing/creation. Unified Brands recommends referencing our product line websites, unifiedbrands.net, for the most updated product information and specifications.







1055 Mendell Davis Drive Jackson, MS 39272 888-994-7636 • Fax 888-864-7636 randellfx.com

Table of Contents

page 2Table of Contents & Congratulations
page 3Serial Number Location & Parts & Service Hotline
page 4-8Randell Limited Warranty
page 9-10Unit Specifications
page 11-12Unit Installation
page 13Gasket Sealing Adjustment
page 14FX-1(2N1) Unit Operation
page 15FX-1(2N1) Control Operation
page 16-17FX-1(2N1) Control Settings
page 18FX-1(2N1)Control LED Functions
page 19FX-1(2N1) Control Setting Instructions
page 20-24FX1-4N1 Control Operation
page 25-27FX1-4N1 Control Settings
page 28FX1-4N1 Control LED Functions
page 29-34FX1-4N1 Unit Operation
page 29-32FX1-4N1 Rapid Chill Operation
page 33-34FX1-4N1 Rapid Thaw Operation
page 35-36Preventive Maintenance
page 37FX-1(2N1) Electrical Diagram
page 38FX1-4N1 Electrical Diagram
page 39Troubleshooting
page 40-42FX-1(2N1) Replacement Parts
page 43-47FX1-4N1 Replacement Parts
page 48-49FX Series Optional Parts

Congratulations on your recent purchase of Randell food service equipment, and welcome to the growing family of satisfied Randell customers.

Our reputation for superior products is the result of consistent quality craftsmanship. From the earliest stages of product design to successive steps in fabrication and assembly, rigid standards of excellence are maintained by out staff of designers, engineers, and skilled employees.

Only the finest heavy-duty materials and parts are used in the production of Randell brand equipment. This means that each unit, given proper maintenance will provide years of trouble free service to its owner.

In addition, all Randell food service equipment is backed by some of the best warranties in the food service industry and by our professional staff of service technicians.

Retain this manual for future reference.

NOTICE: Due to a continuous program of product improvement, Randell reserves the right to make changes in design and specifications without prior notice.

NOTICE: Please read the entire manual carefully before installation. If certain recommended procedures are not followed, warranty claims will be denied.

MODEL NUMBER	
SERIAL NUMBER	
INSTALLATION DATE _	

The serial number is located in the cabinet left side wall. Removal of the insulated insert from the drawer will be nessecary to view data plate.

800-621-8560	Randell Service and Parts Hotline
--------------	--------------------------------------

Congratulations on your purchase of a Randell Manufactured piece of equipment. Randell believes strongly in the products it builds and backs them with the best warranty in the industry. Standard with every unit is the peace of mind that this unit has been thoroughly engineered, properly tested and manufactured to excruciating tolerances, by a manufacturer with over 30 years of industry presence. On top of that front end commitment, Randell has a dedicated staff of certified technicians that monitor our own technical service hotline at **1-800-621-8560** to assist you with any questions or concerns that may arise after delivery of your new Randell equipment.

PARTS WARRANTY

1. One year parts replacement of any and all parts that are found defective in material or workmanship. Randell warrants all component parts of manufactured new equipment to be free of defects in material or workmanship, and that the equipment meets or exceeds reasonable industry standards of performance for a period of one year from the date of shipment from any Randell factory, assembly plant or warehouse facility.

NOTE: warranties are effective from date of shipment, with a thirty day window to allow for shipment, installation and set-up. In the event equipment was shipped to a site other than the final installation site, Randell will warranty for a period of three months following installation, with proof of starting date, up to a maximum of fifteen months from the date of purchase.

2. Free ground freight of customer specified location for all in warranty parts within continental U.S. Component part warranty does not cover glass breakage or gasket replacement. Randell covers all shipping cost related to component part warranty sent at regular ground rates (UPS, USPS). Freight or postage incurred for any express or specialty methods of shipping are the responsibility of the customer.

LABOR COVERAGE

In the unlikely event a Randell manufactured unit fails due to defects in materials or workmanship within the first ninety days, Randell agrees to pay the contracted labor rate performed by an *Authorized Service Agent (ASA)*. Any work performed by a non-ASA will not be honored by Randell. Please consult Randell Technical Support (800-621-8560) for a complete listing of ASAs or visit the service page of our website: <u>www.unifiedbrands.net</u>. Warranties are effective from date of shipment, with a thirty day window to allow for shipment, installation and setup. Where equipment is shipped to any site other than final installation, Randell will honor the labor warranty for a period of ninety days following installation with proof of starting date, up to a maximum of six months from date of purchase.

Temperature adjustments are not covered under warranty, due to the wide range of ambient conditions.

WHEN OPTIONAL 5 YEAR COMPRESSOR WARRANTY APPLIES

- 1. Provide reimbursement to an ASA for the cost of locally obtained replacement compressor in exchange for the return of the defective compressor sent back freight prepaid. Note: Randell does limit amount of reimbursement allowed and does require bill from local supply house where compressor was obtained (customer should not pay servicing agent up front for compressor).
- 2. Provide repair at the manufacturing facility by requiring that the defective unit be sent back to Randell freight prepaid. Perform repair at the expense of Randell and ship the item back to the customer freight collect.
- 3. Furnish complete condensing unit freight collect in exchange for the return of the defective compressor sent back freight prepaid. (Decisions on whether or not to send complete condensing units will be made by Randell's in-house service technician).

WHEN OPTIONAL LABOR EXTENSION POLICY APPLIES

Randell will provide reimbursement of labor to an ASA for any customer that has an optional labor extension of our standard warranty. (Contracted rates do apply) Randell offers both 1 and 2 year extensions. Labor extensions begin at the end of our standard warranty and extend out 9 months to 1 calendar year or 21 months to 2 calendar years from date of purchase. Please contact Randell Manufacturing's technical service hotline at 1-800-621-8560 for details and any question on *Authorized Service Agents (ASA)*.

WHEN EXPORT WARRANTIES APPLY

- 1. Randell Manufacturing covers all non-electrical components under the same guidelines as our standard domestic policy.
- 2. All electrical components operated on 60 cycle power are covered under our standard domestic policy.
- 3. All electrical components operated on 50 cycle power are covered for 90 days from shipment only.
- 4. Extended warranty options are not available from the factory.

ITEMS NOT COVERED UNDER WARRANTY

- 1. Maintenance type of repairs such as condenser cleaning, temperature adjustments, clogged drains and unit leveling.
- 2. Randell does not cover gaskets under warranty. Gaskets are a maintenance type component that are subject to daily wear and tear and are the responsibility of the owner of the equipment. Because of the unlimited number of customer related circumstances that can cause gasket failure all gasket replacement issues are considered non-warranty. Randell recommends thorough cleaning of gaskets on a weekly basis with a mild dish soap and warm water. With proper care Randell gaskets can last up to two years, at which time we recommend replacement of all gaskets on the equipment for the best possible performance.

NOTICE: FOOD LOSS IS NOT COVERED UNDER WARRANTY

- 3. Repairs caused by abuse such as broken glass, freight damage, or scratches and dents.
- 4. Electrical component failure due to water damage from cleaning procedures.

QUOTATIONS

Verbal quotations are provided for customer convenience only and are considered invalid in the absence of a written quotation. Written quotations from Randell are valid for 30 days from quote date unless otherwise specified. Randell assumes no liability for dealer quotations to end-users.

SPECIFICATION & PRODUCT DESIGN

Due to continued product improvement, specification and product design may change without notice. Such revisions do not entitle the buyer to additions. Changes or replacements for previously purchased equipment.

SANITATION REQUIREMENTS

Certain areas require specific annotation requirements other than N.S.F. & U.L. standards. Randell must be advised of these specifications before fabrication of equipment. In these special circumstances, a revised quotation may be required to cover additional costs. Failure to notify Randell before fabrication holds the dealer accountable for all additional charges.

CANCELLATIONS

Orders canceled prior to production scheduling entered into engineering/production and cancelled are subject to a cancellation charge (contact factory for details).

STORAGE CHARGES

Randell makes every effort to consistently meet our customer's shipment expectations. If after the equipment has been fabricated, the customer requests delay in shipment, and warehousing is required:

- 1. Equipment held for shipment at purchasers request for a period of 30 days beyond original delivery date specified will be invoiced and become immediately payable.
- 2. Equipment held beyond 30 days after the original delivery date specified will also include storage charges.

SHIPPING & DELIVERY

Randell will attempt to comply with any shipping, routing or carrier request designated by dealer, but reserves the right to ship merchandise via any responsible carrier at the time equipment is ready for shipment. Randell will not be held responsible for any carrier rate differences; rate differences are entirely between the carrier and purchaser. Point of shipping shall be determined by Randell (Weidman, MI/Tucson, AZ/Jackson, MS). At dealer's request, Randell will endeavor whenever practical to meet dealer's request. Freight charges to be collect unless otherwise noted.

DAMAGES

All crating conforms to general motor carrier specifications. To avoid concealed damage, we recommend inspection of every carton upon receipt. In the event the item shows rough handling or visible damage to minimize liability, a full inspection is necessary upon arrival. Appearance of damage will require removing the crate in the presence of the driver. A notation must be placed on the freight bill and signed for by the truck driver at the time of delivery. Any and all freight damage that occurs to a Randell piece of equipment as a result of carrier handling is not considered under warranty, and is not covered under warranty guidelines. Any freight damage incurred during shipping needs to have a freight claim filed by the receiver with the shipping carrier. Consignee is responsible for filing of freight claims when a clear delivery receipt is signed. Claims for damages must be filed immediately (within 10 days) by the consignee with the freight carrier and all cartons and merchandise must be retained for inspection.

RETURNED GOODS

Authorization for return must first be obtained from Randell before returning any merchandise. Any returned goods shipment lacking the return authorization number will be refused, all additional freight costs to be borne by the returning party. Returned equipment must be shipped in original carton, freight prepaid and received in good conditions. Any returned merchandise is subject to a minimum handling charge (consult factory for rate).

INSTALLATION

Equipment installation is the responsibility of the dealer and/or their customer. Randell requires all equipment to be professionally installed.

PENALTY CLAUSES

Dealer penalty clauses, on their purchase order or contractually agreed to between the dealer and their clients are not binding on Randell. Randell does not accept orders subject to penalty clauses. This agreement supersedes any such clauses in dealer purchase orders.

*FOOTNOTES IN REFERENCE TO PARAGRAPHS ABOVE

1. Herein called Randell.

2. NET means list price less discount, warranty, labor policy, freight, Randell delivery and other miscellaneous charges.

CASH DISCOUNTS WILL BE CALCULATED ON NET ONLY.

Unit Specifications



Model FX-2WS Double Flexi-Cold Drawer

Model	Description	L E N G T H	D E P T H	H E I G H T	D R A W E R S	CUBIC FEET OF STORAGE	COMPRESSOR SIZE	ACTUAL AMP DRAW	POWER USAGE (PER DAY) (REFRIGERATOR)	POWER USAGE (PER DAY) (FREEZER)	V O L T S	N E M A	SHIP WT. Ibs
FX-1	FLEXICOLD 1 SECTION SYSTEM 2N1 BASE MODEL	46"	29.6"	16.4"	1	3.0	6.1cc	3.9	1.22kw	1.99kw	115	5-15p	245
FX-1CS	FLEXICOLD 1 SECTION 2N1 EQUIPMENT- TOP SYSTEM	48''	33"	24"	1	3.0	6.1cc	3.9	1.22kw	1.99kw	115	5-15p	385
FX-2CS	FLEXICOLD 2 SECTION 2N1 EQUIPMENT- TOP SYSTEM	96"	33"	24"	2	6.0	6.1cc each	7.8	2.44kw	3.98kw	115	5-15p	770
FX-2WS	FLEXICOLD 2 SECTION 2N1 PREP WORK- TOP SYSTEM	46"	29.6"	37.3"	2	6.0	6.1cc each	7.8	2.44kw	3.98kw	115	5-15p	635
FX-3SS	FLEXICOLD 3 SECTION 2N1 PRECISION STORAGE SYSTEM	46"	29.6"	53.7"	3	9.0	6.1cc each	11.7	3.66kw	5.97kw	115	5-15p	891

Model	Description	LENGTH	D E P T H	H E I G H T	S E C T I O N S	CUBIC FEET OF STORAGE	COMPRESSOR SIZE	ACTUAL AMP DRAW	POWER USAGE (PER DAY) (REFRIGERATOR)	POWER USAGE (PER DAY) (FREEZER)	POWER USAGE (PER 4 HOUR BLAST CHILLER CYCLE EACH UNIT)	POWER USAGE (PER 6 HOUR RAPID THAW CYCLE EACH UNIT)	V O L T S	N E M A	SHIP WT.Ibs
FX1-4N1	FLEXICOLD 1 SECTION SYSTEM 4N1 BASE MODEL	46"	29.6"	16.4"	1	3.0	8.8cc	6.3	1.22 kw	1.99 kw	2.1 kw	1.4 kw	115	5-15p	250
FX1- 4N1CS	FLEXICOLD 1 SECTION 4N1 EQUIPMENT- TOP SYSTEM	48''	33"	24"	1	3.0	8.8cc	6.3	1.22 kw	1.99 kw	2.1 kw	1.4 kw	115	5-15p	390
FX2- 4N1CS	FLEXICOLD 2 SECTION 4N1 EQUIPMENT- TOP SYSTEM	96"	33"	24"	2	6.0	8.8cc each	6.3 ea.	2.44 kw	3.98 kw	2.1 kw	1.4 kw	115 ea.	(2) 5-15p	780
FX2- 4N1CSL	FLEXICOLD 2 SECTION COMBO EQUIPMENT- TOP SYSTEM 4N1 LF 2N1 RT	96''	33"	24''	2	6.0	(1) 8.8cc (1) 6.1cc	10.2	2.44 kw	3.98 kw	2.1 kw	1.4 kw	115	5-15p	780
FX2- 4N1CSR	FLEXICOLD 2 SECTION COMBO EQUIPMENT- TOP SYSTEM 2N1 LF 4N1 RT	96''	33''	24''	2	6.0	(1) 6.1cc (1) 8.8cc	10.2	2.44 kw	3.98 kw	2.1 kw	1.4 kw	115	5-15p	780
FX2- 4N1WS	FLEXICOLD 2 SECTION 4N1 PREP WORK- TOP SYSTEM	46"	29.6"	37.3"	2	6.0	8.8cc each	6.3 ea.	2.44 kw	3.98 kw	2.1 kw	1.4 kw	115 ea.	(2) 5-15p	645
FX2- 4N1WST	FLEXICOLD 2 SECTION COMBO PREP WORK- TOP SYSTEM 4N1 TOP	46"	29.6"	37.3"	2	6.0	(1) 8.8cc (1) 6.1cc	10.2	2.44 kw	3.98 kw	2.1 kw	1.4 kw	115	5-15p	645
FX2- 4N1WSB	FLEXICOLD 2 SECTION COMBO PREP WORK- TOP SYSTEM 4N1 BOTTOM	46"	29.6"	37.3"	2	6.0	(1) 6.1cc (1) 8.8cc	10.2	2.44 kw	3.98 kw	2.1 kw	1.4 kw	115	5-15p	645
FX3- 4N1SST	FLEXICOLD 3 SECTION COMBO PRECISION STORAGE SYSTEM 4N1 TOP	46"	29.6"	53.7"	3	9.0	(1) 8.8cc (2) 6.1cc	6.3 & 7.8	3.66 kw	5.97 kw	2.1 kw	1.4 kw	115 ea.	(2) 5-15p	905
FX3- 4N1SSTC	FLEXICOLD 3 SECTION COMBO PRECISION STORAGE SYSTEM 4N1 TOP 2	46"	29.6"	53.7"	3	9.0	(2) 8.8cc (1) 6.1cc	6.3 & 10.2	3.66 kw	5.97 kw	2.1 kw	1.4 kw	115 ea.	(2) 5-15p	905

SELECTING A LOCATION FOR YOUR NEW UNIT

The following conditions should be considered when selecting a location for your unit:

- 1. **Floor Load:** The area on which the unit will rest must be level, free of vibration, and suitably strong enough to support the combined weights of the unit plus the maximum product load weight
- 2. **Clearance:** Clearance for opening the drawer and access to its contents is the only requirements. Do not place any object that can block the ventilation exhaust from the machine compartment register.
- 3. Ventilation: The air cooled self contained unit requires a sufficient amount of cool clean air. Avoid surrounding your equipment stand around other heat generating equipment and out of direct sunlight. Also, avoid locating in an unheated room or where the room temperature may drop below 55°F or above 90°F.

INSTALLATION CHECKLIST

After the final location has been determined, refer to the following checklist prior to start-up:

- 1. Check all exposed refrigeration lines to ensure that they are not kinked, dented, or rubbing together.
- 2. Check that the condenser and evaporator fans rotate freely without striking any stationary members.
- 3. Unit must be properly leveled; check all legs or casters to ensure they all are in contact with the floor while maintaining a level work surface. Adjusting bullet feet heights or shimming casters may be necessary if the floor is not level. NOTE: Damage to equipment may result if not followed. Randell is not responsible for damage to equipment if improperly installed.
- 4. Plug in unit and turn on main on/off power switch. The main power switch is located in the front panel next to the digital control
- 5. Allow unit time to cool down to temperature. If temperature adjustments are required, the temperature control is located on the front panel. Confirm that the unit is holding the desired temperature.
- 6. Refer to the front of this manual for serial number location. Please record this information in your manual on page 3 now. It will be necessary when ordering replacement parts or requesting warranty service.
- 7. Before putting in food, allow your unit to operate for approximately (1) hour so that interior of the unit is cooled down to storage temperature.

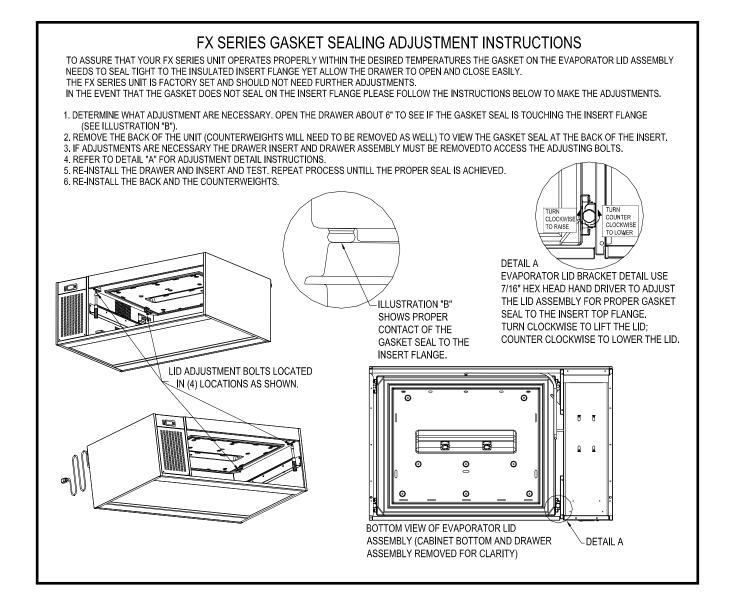
NOTE: All motors are oiled and sealed.

NOTE: FAILURE TO FOLLOW INSTALLATION GUIDELINES AND RECOMMENDATIONS MAY VOID THE WARRANTY ON YOUR UNIT.

ELECTRICAL SUPPLY: Any wiring should be done by a qualified electrician in accordance with local electrical codes. A properly wired and grounded outlet will assure proper operation. Please consult the data tag attached to the compressor to ascertain the correct electrical requirements. Supply voltage and amperage requirements are located on the serial number tag located inside the mechanical housing.

NOTE: It is important that a voltage reading be made at the compressor motor electrical connections, while the unit is in operation to verify the correct voltage required by the compressor is being supplied. Low or high voltage can detrimentally affect operation and thereby void its warranty.

NOTE: it is important that your unit has its own dedicated line. Condensing units are designed to operate with a voltage fluctuation of plus or minus 10% of the voltage indicated on the unit data tag. Burn out of a condensing unit due to exceeding voltage limits will void the warranty.



PRODUCT PLACEMENT AND MAXIMUM LOAD LEVELS

- 1. This unit's insulated drawer insert is provided and designed to hold food products with or without containers.
- 2. Refrigerated or freezer tempered air is introduced into the insulated drawer insert from above and circulates around the product for even temperature distribution.
- 3. For the unit to operate at full efficiency the drawer seals should be maintained in good condition. It is essential that product is not stored above the Max Fill line as this can damage the seals and affect the operation of the unit.
- This unit is designed for *holding* products at temperatures -5°F to 40°F. Products placed in unit should be pre-chilled to the holding temperature. This unit is not intended for use as a *pull down* cabinet.
- 5. The unit is capable of storing any food product. However, products which may give off acidic odors like vinegar, onions, etc should be suitably sealed. Randell also recommends containers with liquid food products be stored with lids.
- 6. The drawer system is designed for easy unobstructed access to the product in the insulated drawer insert. The track should run smoothly with little resistance during the motion of opening and closing the drawer. The drawer will have more resistance when the unit is warm and not operating in either the refrigeration or freezer mode, this is normal as the gasket will contract slightly when the unit is cooling and allow smooth travel of the drawer.

AMBIENT CONDITIONS

1. This unit is designed for operation in a room ambient of 86°F / 55% relative humidity. It should never be used outside or located in direct sunlight.

Randell has attempted to preset the temperature control to ensure that your unit runs at an optimum temperature, but due to varying ambient conditions, including elevation, food type and your type of operation, you may need to alter this temperature.







Your FX-1 (2N1) Series Unit is equipped with an electronic temperature control. Figure 1, left, illustrates the Dixell XR60C control location on the front above the louvered panel.

Figure 2, left, illustrates an alternate electronic temperature control, Dixell XR60CX with blue LED.

Before making temperature adjustments:

- A. Allow adequate time for the cabinet temperature to equalize. When initially started or when first loaded, it can take a long time for temperatures in the display area to stabilize.
- B. Make sure that unit operation is not being effected by room ambient conditions. (See Ambient Conditions section above). If there are any significant ambient issues, adjusting the temperature setting may not help.

To raise temperature:

- A. Push and hold the "SET" button until set point 33 appears then release the "SET" button. 33 is the current set point temperature.
- B. Push and release the up arrow 1 or more times until the desired temperature is displayed. Push and release the "SET" button one time. The new set point will flash 3 times and then will be locked in.

To lower temperature:

- A. Push and hold the "SET" button until 33 appears and then release the "SET" button. 33 is the current set point temperature.
- B. Push and release the up arrow 1 or more times until the desired temperature is displayed. Push and release the "SET" button one time. The new set point will flash 3 times and then will be locked in.

NOTE: The FX-1 (2N1) Series Unit is designed to operate in both refrigerated or freezer mode by adjusting the "SET" point to the desired temperature. The maximum highest setting is 40°F and the minimum lowest setting is -5°F. If the settings need to go above or below this point there may be other contributing factors as to the cause of the temperature variances, please contact the factory at 1-800-621-8560.

FX-1 (2N1) Control Settings

Dixell control XR60C-4N1F0 w/Red LED

	Dendell Oceaniel Octions		
	Randell Control Settings	FX-Series	
	XR60C-4N1F0	Freezer	
	Randel Part No.	RF CNT0604	
Code	Locked	NO	Code
SET	Thermostat set point	-1	SET
HY	Thermostat Differential (hysterisis)	2	HY
LS	Lower Set Point	-4	LS
US	Upper Set Point	59	US
Ot	Offset Room Temp	0	Ot
P2P	2nd Probe Present	Y	P2P
OE	Evaporator Probe Calibration	0	OE
OdS	Output delay @ Startup	0	OdS
AC	Anti-Cycle Time (min off after cycle)	1	AC
CCt	Comp Continuous time, (Fast Freeze)	3	CCt
COn	Compressor ON time (probe failure)	5	COn
COF	Compressor OFF (probe failure)	5	COF
CF	°C / °F	F	CF
Lod	Probe Displayed (P1 or P2)	P1	Lod
rES	Resolution 0.0 °C (only °C)	IN	rES
tdF	Defrost Type	EL	tdF
dtE	Defrost Termination Temp	45	dtE
ldF	Interval between Defrosts	12	ldF
ndF	(Maximum) length of Defrost	30	ndF
dSd	Start defrost delay	0	dSd
dFd	Display during Defrost	dEF	dFd
dAd	Max display delay after defrost	12	dAd
Fdt	Drip time after defrost end	3	Fdt
dPo	First defrost after startup	Y	dPo
dAF	Defrost delay after Fast Freezing	0	dAF
FnC	Fan Operating Mode	o-n	FnC
Fnd	Fan Delay after Defrost	4	Fnd
Fct	Fan Temperature Differential	0	Fct
FSt	Fan Stop Temperature (coil temp)	65	FSt
ALc	Alarm Configuration	Ab	ALc
ALU	Alarm Upper (max alarm)	65	ALU
ALL	Alarm Lower (minimum alarm)	-10	ALL
ALd	Alarm Delay (min)	90	ALd
dAO	Alarm Delay at startup (hrs/.10min)	1.3	dAO
ilP	Digital Input Polarity (Door Switch)	OP	ilP
ilF	Digital Input Configuration	dor	ilF
did	Digital Input Delay (Door Open)	10	did
nPS	Switch Action	0	nPS
odC	Compressor and Fan Status	FC	odC
PbC	Probe Selection PTC/NTC	ntc	PbC
dP1	Display Probe 1 (Room Probe)	-	dP1
dP2	Display Probe 2 (Coil Probe)	-	dP2
rEL	Software Info	-	rEL
Ptb	Software info	-	Ptb
	bold = hidden Parameters		

FX-1 (2N1) Control Settings

Dixell control XR60CX-4N1F0 w/Blue LED

	Randell Control Settings	FX-Series			Randell Control Settings	FX-Series	
	DIXELL PART NUMBER XR60CX-4R0F1	2N1 SETTINGS			DIXELL PART NUMBER XR60CX-4R0F1	2N1 SETTINGS	
	RANDELL PART NUMBER RF CNT0707	SETTINGS			RANDELL PART NUMBER RF CNT0707	SETTINGS	
CODE	LOCKED	NO.	CODE	CODE	LOCKED	NO.	CODE
Prb	READ PROBE	-	Prb	dAF	DEFROST DELAY AFTER FAST FREEZING	0	dAF
rPr	ROOM TEMPERATURE PROBE READING	READ ONLY	rPr	Fnc	FANS OPERATING MODE	O-N	Fnc
Set	SET POINT	-1	Set	Fnd	FAN DELAY AFTER DEFROST	4	Fnd
PR1	USER VARIABLE PARAMETERS	-	PR1	Fct	DIFFERENTIAL OF TEMP. FOR FORCED ACTIVATION OF FANS	0	Fct
Set	SET POINT	-1	Set	FSt	FAN STOP TEMPERATURE	65	FSt
HY	DIFFERENTIAL	2	HY	Fon	FAN ON TIME WITH COMPRESSOR OFF	0	Fon
LS	MINIMUM SET POINT	-5	LS	FoF	FAN OFF TIME WITH COMPRESSOR OFF	0	FoF
US	MAXIMUM SET POINT	59	US	FAP	PROBE SELECTION FOR FAN MANAGEMENT	P2	FAP
Ot	THERMOSTAT PROBE CALIBRATION	0	Ot	ALc	TEMPERATURE ALARMS CONFIGURATION	AB	ALc
P2P	EVAPORATOR PROBE PRESENCE	Y	P2P	ALU	MAXIMUM TEMPERATURE ALARM	65	ALU
OE	EVAPORATOR PROBE CALIBRATION	0	OE	ALL	MINIMUM TEMPERATURE ALARM	-10	ALL
P3P	THIRD PROBE PRESENCE	N	P3P	AFH	DIFFERENTIAL FOR TEMPERATURE ALARM RECOVERY	1	AFH
O3	THIRD PROBE CALIBRATION	0	O3	ALd	TEMPERATURE ALARM DELAY	90	ALd
P4P	FOURTH PROBE PRESENCE	N	P4P	dAO	DELAY OF TEMPERATURE ALARM AT START	1.3	dAO
O4	FOURTH PROBE CALIBRATION	0	O4	AP2	PROBE FOR TEMPERATURE ALARM OF CONDENSER	NP	AP2
OdS	OUTPUT DELAY AT START UP	0	OdS	AL2	CONDENSER FOR LOW TEMPERATURE ALARM	-40	AL2
AC	ANTI-SHORT CYCLE DELAY	1	AC	AU2	CONDENSER FOR HIGH TEMPERATURE ALARM	230	AU2
rtr	P1-P2 PERCENTAGE OF REGULATION	100	rtr	AH2	DIFFERENTIAL FOR CONDENSER TEMPERATURE ALARM RECOVERY	4	AH2
CCt	CONTINUOUS CYCLE DURATION	3	CCt	AD2	CONDENSER TEMPERATURE ALARM DELAY	15	AD2
CCS	SET POINT FOR CONTINUOUS CYCLE	0	ccs	dA2	DELAY FOR CONDENSER TEMPERATURE ALARM AT START UP	1.3	dA2
COn	COMPRESSOR ON TIME WITH FAULTY PROBE	5	COn	bLL	COMPRESSOR OFF FOR CONDENSER LOW TEMPERATURE ALARM	N	bLL
COF	COMPRESSOR OFF TIME WITH FAULTY PROBE	5	COF	AC2	COMPRESSOR OFF FOR CONDENSER HIGH TEMPERATURE ALARM	N	AC2
CF	TEMPERATURE MEASUREMENT UNITS	F	CF	i1P	DIGITAL INPUT POLARITY	OP	i1P
rES	RESOLUTION	IN	rES	i1F	DIGITAL INPUT CONFIGURATION	dor	i1F
Lod	PROBE DISPLAYED	P1	Lod	did	DIGITAL INPUT ALARM DELAY	10	did
rEd	X-REP DISPLAY	Р	rEd	Nps	NUMBER OF ACTIVATIONS OF PRESSURE SWITCH	0	Nps
dLy	DISPLAY TEMPERATURE DELAY	0	dLy	odc	COMPRESSOR AND FAN STATUS WITH DOOR OPEN	F_C	odc
dtr	p1-p2 PERCENTAGE FOR DISPLAY	50	dtr	rrd	REGULATION RESTART WITH DOOR OPEN ALARM	Y	rrd
tdF	DEFROST TYPE	EL	tdF	HES	DIFFERENTIAL FOR ENERGY SAVING	0	HES
dFP	PROBE SELECTION FOR DEFROST TERMINATION	P2	dFP	PbC	KIND OF PROBE	NTC	PbC
dtE	DEFROST TERMINATION TEMPERATURE	45	dtE	Adr	SERIAL ADDRESS	1	Adr
ldF	INTERVAL BETWEEN DEFROST CYCLES	8	ldF	onF	ON/OFF KEY ENABLING	NU	onF
NdF	MAXIMUM LENGTH FOR DEFROST	35	NdF	dP1	ROOM PROBE DISPLAY	-	dP1
dSd	START DEFROST DELAY	0	dSd	dP2	EVAPORATOR PROBE DISPLAY	-	dP2
dFd	DISPLAYING DURING DEFROST	DEF	dFd	dP3	THIRD PROBE DISPLAY	-	dP3
dAd	MAXIMUM DISPLAY DELAY AFTER DEFROST	12	dAd	dP4	FOURTH PROBE DISPLAY	-	dP4
Fdt	DRAINING TIME	3	Fdt	rSe	REAL SET POINT	-	rSe
dPo	FIRST DEFROST AFTER STARTUP	Y	dPo	rEL	SOFTWARE RELEASE	-	rEL
	bold = hidden Parameters			Ptb	MAP CODE	-	Ptb

USE OF LEDS

Each LED function is described in the following table.

LED	MODE	FUNCTION
**	ON	Compressor enabled
褖	Flashing	Anti-short cycle delay enabled
漆	ON	Defrost enabled
漆	Flashing	Drip time in progress
55	ON	Fans enabled
\$	Flashing	Fans delay after defrost in progress.
(b)	ON	An alarm is occurring
۲	ON	Continuous cycle is running
※)	ON	Energy saving enabled
°C/°F	ON	Measurement unit
°C/°F	Flashing	Programming phase

DIXELL CONTROL SETTING INSTRUCTIONS

HOW TO CHANGE A PARAMETER VALUE

To change the parameter's values operate as follows:

- 1. Enter the Programming mode by pressing the Set and Down Arrow for 3 seconds (the defrost and water drops symbol will start blinking)
- 2. Select the required parameter.
- 3. Press the "SET" key to display its value. (Now only the defrost symbol is blinking).
- 4. Use up or down arrow to change its value.
- 5. Press "SET" to store the new value and move to the following parameter.

To Exit: Press SET + up arrow or wait 15 seconds without pressing a key.

THE HIDDEN MENU

The hidden menu includes all the parameter of the instrument.

HOW TO ENTER THE HIDDEN MENU

- 1. Enter the Programming mode by pressing the set + down arrow key for 3 seconds (the defrost and water drops symbol will start blinking)
- 2. When a parameter is displayed; keep pressed the Set + down arrows for more than 7 seconds. The Pr2 label will be displayed immediately followed from the HY parameter.

NOW YOU ARE IN THE HIDDEN MENU.

- 3. Select the required parameter.
- 4. Press the "SET" key to display its value (Now only the defrost symbol LED is blinking).
- 5. Use up or down arrow to change its value.
- 6. Press "SET" to store the new value and move to the following parameter.

HOW TO LOCK THE KEYBOARD

- 1. Keep pressed for more than 3 seconds the up and down arrow keys.
- 2. The "**POF**" message will be displayed and the keyboard will be locked. At this point it will be possible only to see the set point or the **MAX** or **Min** temperature stored.
- 3. If a key is pressed more than 3 seconds the "**POF**" message will be displayed.

TO UNLOCK THE KEYBOARD

1. Keep pressed together for more than 3 seconds the up and down arrow keys till the "**POn**" message will be displayed.

ELECTRONIC CONTROL FEATURES AND OPERATIONS

Randell has attempted to preset the temperature control to ensure that your unit operates at an optimum temperature, but due to varying ambient conditions, including elevation, food type and your type of operation, you may need to alter this temperature.



FIGURE-A

Your FX1-4N1 Series Unit is equipped with an electronic temperature control. **Figure A**, above, illustrates the control location on the front above the louvered panel. This control is a Dixell model number XB570L with a blue LED display and stainless steel cover.



FIGURE-B

Figure B shows the control without the stainless steel cover and with the examples of the displayed information available with this control. The Randell FX1-4N1 control will feature a blue LED display in place of the red display shown in **Figure B**.

FX1-4N1 Control Operation con't

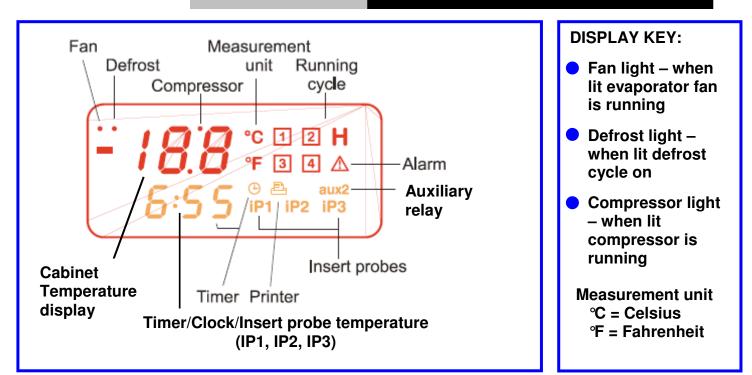


FIGURE - C

Running cycle

Refrigerator mode operating set point at 35°F



1

Freezer mode operating set point at -4 °F



Quick Chill mode chills 22 lbs of hot product to 35 °F and holds automatically in refrigerated mode

Rapid Thaw mode thaws 20 lbs of frozen product in approximately 6 hours and holds automatically in refrigerated mode

Hold Mode operates at any set point temperature.
 Set point from factory is at 35 °F



Alarm display indicates failure

aux2 When lit Auxiliary function mode in operation IP1, IP2, IP3 When lit indicates insert probe is in use

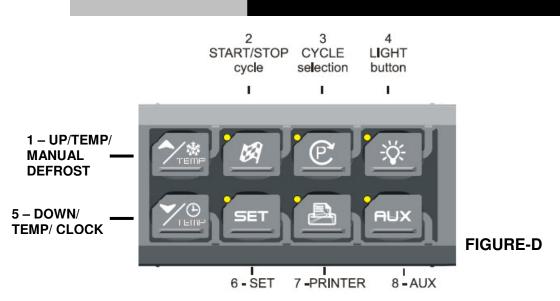


When lit Timer mode is set



When lit Printer is on

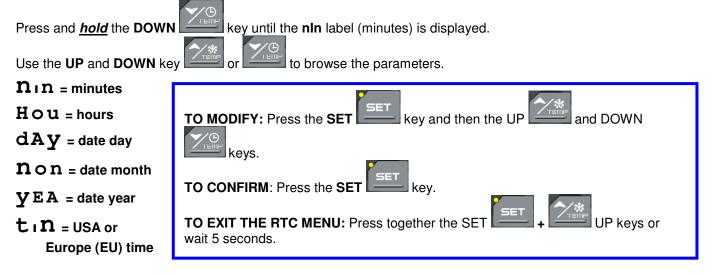
FX1-4N1 Control Operation con't

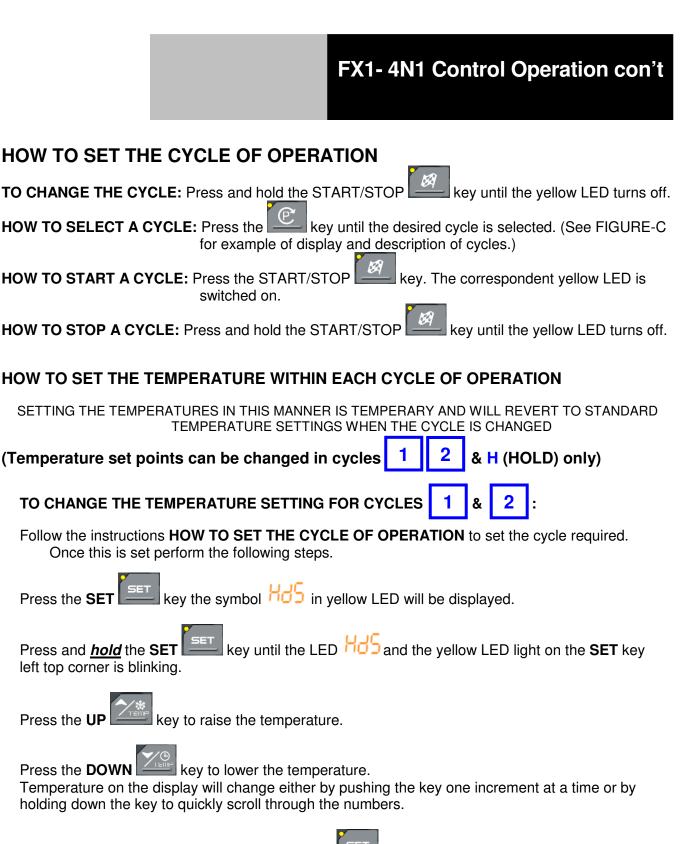


CONTROL KEY DESCRIPTIONS

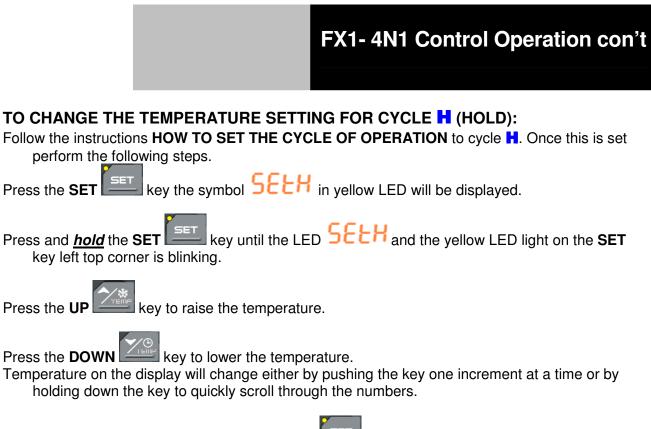
- UP/TEMP/MANUAL DEFROST used to browse menu, raise temperature settings and activate manual defrost.
- 2. START/STOP cycle used to start and stop current cycle monitored by the yellow LED upper left corner of button.
- 3. CYCLE selection used to browse cycles 1 through 4 monitored by the yellow LED upper left corner of button.
- 4. LIGHT button used to switch the light on and off (this button is not used in model FX1-4N1).
- 5. DOWN/TEMP/CLOCK used to browse menu, lower temperature settings and set real time clock
- 6. SET used to change the set points in any cycle monitored by the yellow LED upper left corner of button.
- 7. PRINTER used to enable/disable the printer if printer is provided monitored by the yellow LED upper left corner of button.
- 8. AUX used to switch auxiliary functions on and off monitored by the yellow LED upper left corner of button.

HOW TO SET THE REAL TIME CLOCK (RTC)





Once the temperature is selected press the **SET** key to confirm and activate this new setting.



			SET			
Once the tem	perature is selected	nress the SF1	Key to	confirm and	activate this	new settina
						now ooung.

FX1-4N1 Control Settings

	RANDELL CONTROL SETTINGS	FX1-4N1	
	DIXELL PART NUMBER XB570L-4R0F1		
	RANDELL PART NUMBER RF CNT0703		
CODE	LOCKED	NO	CODE
Prb	READ PROBE	-	Prb
rPr	ROOM TEMPERATURE PROBE READING	READ ONLY	rPr
Epr	EVAPORATOR PROBE TEMPERATURE READING	READ ONLY	Epr
iPr	INSERT TEMPERATURE PROBE READING	READ ONLY	iPr
Pr1	USER VARIABLE PARAMETERS	-	Pr1
HY	HYINTERVENTION DIFFERENTIAL FOR SET POINT	4	HY
AC	ANTI-SHORT CYCLE DELAY	1	AC
tCY	DURATION OF LAST CYCLE	READ	tCY
tP1	DURATION OF FIRST PHASE OF THE LAST CYCLE	ONLY READ ONLY	tP1
tP2	DURATION OF SECOND PHASE OF THE LAST CYCLE	READ	tP2
tP3	DURATION OF THIRD PHASE OF THE LAST CYCLE	READ	tP3
PR2	INSTALLER PARAMETERS	-	PR2
PAS	PASS CODE	321	PAS
HY	HYINTERVENTION DIFFERENTIAL FOR SET POINT	4	HY
AC	ANTI-SHORT CYCLE DELAY	1	AC
PAU	TIME OF STANDBY	0	PAU
PFt	MAXIMUM ACCEPTANCE DURATION OF POWER FAILURE	15	PFt
Con	COMPRESSOR ON TIME WITH FAULTY PROBE	15	Con
COF	COMPRESSOR OFF TIME WITH FAULTY PROBE	15	COF
rPO	THERMOSTAT PROBE CALIBRATION	0	rPO
EPP	EVAPORATOR PROBE PRESENCE	YES	EPP
EPO	EVAPORATOR PROBE CALIBRATION	0	EPO
i1P	INSERT PROBE 1 PRESENCE	NO	i1P
i1o	INSERT PROBE 1 CALIBRATION	0	i1o
i2P	INSERT PROBE 2 PRESENCE	NO	i2P
i2o	INSERT PROBE 2 CALIBRATION	0	i2o
i3P	INSERT PROBE 3 PRESENCE	NO	i3P
i3o	INSERT PROBE 3 CALIBRATION	0	i3o
rEM	END CYCLE PROBE SELECTION	RPT	rEM
CF	TEMPERATURE MEASUREMENT UNITS	F	CF
rES	RESOLUTION (%%DC ONLY)	IN	rES
Lod	UPPER DISPLAY VISUALIZATION	RP	Lod
rEd	REMOTE DISPLAY, X-REP, VISUALIZATION	RP	rEd
d1P	DOOR SWITCH INPUT POLARITY	OP	d1P
odc	COMPRESSOR AND FAN STATUS WHEN OPEN DOOR	F-C	odc
doA	OPEN DOOR ALARM DELAY	5	doA
dLc	STOP COUNTDOWN OF THE RUNNING CYCLE WITH DOOR OPEN	YES	dLc

26

FX1- 4N1 Control Settings con't

	RANDELL CONTROL SETTINGS	FX1-4N1	
	DIXELL PART NUMBER XB570L-4R0F1		-
	RANDELL PART NUMBER RF CNT0703		
CODE	LOCKED (CON'T)	NO	CODE
rrd	REGULATION RESTART WITH DOOR OPEN ALARM	NO	rrd
d2F	SECOND DIGITAL INPUT CONFIGURATION	EAL	d2F
d2P	CONFIGURABLE DIGITAL INPUT POLARITY	CL	d2P
did	TIME DELAY FOR DIGITAL INPUT ALARM	5	did
oA1	FIRST AUXILIARY RELAY CONFIGURATION (7-8)	TNR	oA1
oA2	FIRST AUXILIARY RELAY CONFIGURATION (1-2)	C2	oA2
oA3	FIRST AUXILIARY RELAY CONFIGURATION (9-10)	C2	oA3
2CH	COMPRESSOR SETTING DURING THE HOLDING PHASE	C1	2CH
OAt	SECOND COMPRESSOR SWITCHING ON DELAY	0	OAt
OAS	SET POINT FOR SECOND COMRESSOR	-50	OAS
OAH	DIFFERENTIAL FOR SECOND COMPRESSOR	1	OAH
Oai	PROBE SELECTION FOR THE SECOND COMPRESSOR	RP	Oai
OSt	AUXILIARY OUTPUT TIMER	0	OSt
OSS	SETPOINT FOR AUXILIARY OUTPUT	0	OSS
OSH	DIFFERENTIAL FOR AUXILIARY OUTPUT	1	OSH
OSi	PROBE SELECTION FOR THE SECOND COMPRESSOR	RP	OSi
tdf	DEFROST TYPE	RE	tdf
ldF	INTERVAL BETWEEN DEFROST CYCLES	8	ldF
dtE	DEFROST TERMINATION TEMPERATURE	47	dtE
NdF	MAXIMUM LENGTH OF DEFROST	35	NdF
dFd	TEMPERATURE DISPLAYED DURING DEFROST	DEF	dFd
Fdt	DRIP TIME	6	Fdt
dAd	DEFROST DISPLAY TIME OUT	12	dAd
FnC	FANS OPERATING MODE DURING THE HOLDING PHASE	O-N	FnC
FSt	FAN STOP TEMPERATURE	68	FSt
AFH	DIFFERENTIAL FOR THE STOP TEMPERATURE AND FOR THE ALARM	1	AFH
Fnd	FAN DELAY AFTER DEFROST	2	Fnd
ALU	MAXIMUM TEMPERATURE ALARM	15	ALU
ALL	MINIMUM TEMPERATURE ALARM	10	ALL
ALd	TEMPERATURE ALARM DELAY	30	ALd
EdA	TEMPERATURE ALARM DELAY AT END OF DEFROST	30	EdA
tbA	SILENCING ALARM RELAY	YES	tbA
Adr	ADDRESS FOR RS485	1	Adr
bUt	BUZZER ACTIVATION AT THE END OF THE CYCLE	1	bUt
tPb	TYPE OF PROBE	NTC	tPb
rEL	RELEASE CODE	-	rEL
Ptb	PARAMETER CODE	-	Ptb

FX1- 4N1 Control Settings con't

	RANDELL CONTROL CYCLE SETTINGS	FX1- 4N1			RANDELL CONTROL CYCLE SETTINGS	FX1- 4N1	
	DIXELL PART NUMBER XB570L-4R0F1				DIXELL PART NUMBER XB570L-4R0F1		
	RANDELL PART NUMBER RF CNT0703				RANDELL PART NUMBER RF CNT0703		
CODE		NO	CODE	CODE		NO	CODE
Fcy	CYCLE MANAGEMENT SETTINGS	-	Fcy	Fcy	CYCLE MANAGEMENT SETTINGS	-	Fcy
Cy1	CYCLE 1 SETTINGS REFRIGERATOR 35 °F SETTING	-	Cy1	СуЗ	CYCLE 3 SETTINGS QUICK CHILL 5 HOUR SETTING	-	СуЗ
cyS	CYCLE SETTING	tin	cyS	cyS	CYCLE SETTING	tin	cyS
dbC	DEFROST BEFORE THE CYCLE	No	dbC	dbC	DEFROST BEFORE THE CYCLE	No	dbC
iS1	INSERT PROBE SET POINT FIRST PHASE	32	iS1	iS1	INSERT PROBE SET POINT FIRST PHASE	38	iS1
rS1	ROOM PROBE SET POINT FIRST PHASE	35	rS1	rS1	ROOM PROBE SET POINT FIRST PHASE	2	rS1
Pd1	MAXIMUM TIME FOR FIRST PHASE	OFF	Pd1	Pd1	MAXIMUM TIME FOR FIRST PHASE	2	Pd1
iS2	INSERT PROBE SET POINT SECOND PHASE	32	iS2	iS2	INSERT PROBE SET POINT SECOND PHASE	38	iS2
rS2	ROOM PROBE SET POINT SECOND PHASE	35	rS2	rS2	ROOM PROBE SET POINT SECOND PHASE	0	rS2
Pd2	MAXIMUM TIME FOR SECOND PROBE	OFF	Pd2	Pd2	MAXIMUM TIME FOR SECOND PROBE	2	Pd2
iS3	INSERT PROBE SET POINT THIRD PHASE	32	iS3	iS3	INSERT PROBE SET POINT THIRD PHASE	35	iS3
rS3	ROOM PROBE SET POINT THIRD PHASE	35	rS3	rS3	ROOM PROBE SET POINT THIRD PHASE	20	rS3
Pd3	MAXIMUM TIME FOR THIRD PROBE	OFF	Pd3	Pd3	MAXIMUM TIME FOR THIRD PROBE	1	Pd3
dbH	DEFROST BEFORE HOLDING PHASE	YES	dbH	dbH	DEFROST BEFORE HOLDING PHASE	YES	dbH
Hds	SET POINT FOR HOLDING PHASE	35	Hds	Hds	SET POINT FOR HOLDING PHASE	35	Hds
Cy2	CYCLE 2 SETTINGS FREEZER -4 °F SETTING	-	Cy2	Cy4	CYCLE 4 SETTINGS RAPID THAW 6 HOUR SETTING	-	Cy4
cyS	CYCLE SETTING	tin	cyS	cyS	CYCLE SETTING	tin	cyS
dbC	DEFROST BEFORE THE CYCLE	No	dbC	dbC	DEFROST BEFORE THE CYCLE	No	dbC
iS1	INSERT PROBE SET POINT FIRST PHASE	0	iS1	iS1	INSERT PROBE SET POINT FIRST PHASE	32	iS1
rS1	ROOM PROBE SET POINT FIRST PHASE	-4	rS1	rS1	ROOM PROBE SET POINT FIRST PHASE	41	rS1
Pd1	MAXIMUM TIME FOR FIRST PHASE	OFF	Pd1	Pd1	MAXIMUM TIME FOR FIRST PHASE	3	Pd1
iS2	INSERT PROBE SET POINT SECOND PHASE	0	iS2	iS2	INSERT PROBE SET POINT SECOND PHASE	32	iS2
rS2	ROOM PROBE SET POINT SECOND PHASE	-4	rS2	rS2	ROOM PROBE SET POINT SECOND PHASE	41	rS2
Pd2	MAXIMUM TIME FOR SECOND PROBE	OFF	Pd2	Pd2	MAXIMUM TIME FOR SECOND PROBE	2	Pd2
iS3	INSERT PROBE SET POINT THIRD PHASE	0	iS3	iS3	INSERT PROBE SET POINT THIRD PHASE	32	iS3
rS3	ROOM PROBE SET POINT THIRD PHASE	-4	rS3	rS3	ROOM PROBE SET POINT THIRD PHASE	38	rS3
Pd3	MAXIMUM TIME FOR THIRD PROBE	OFF	Pd3	Pd3	MAXIMUM TIME FOR THIRD PROBE	1	Pd3
dbH	DEFROST BEFORE HOLDING PHASE	YES	dbH	dbH	DEFROST BEFORE HOLDING PHASE	NO	dbH
Hds	SET POINT FOR HOLDING PHASE	-4	Hds	Hds	SET POINT FOR HOLDING PHASE	35	Hds

MEANING OF THE LED DISPLAYS

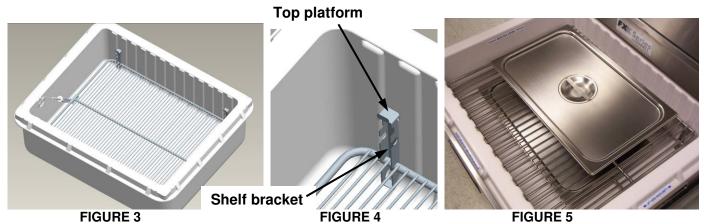
A series of light points on the front panels is used to monitor the loads controlled by the instrument. Each LED function is described in the following table.

LED	MODE	ACTION
₩	ON	- Compressor enabled
*	Flashing	- Programming Phase (flashing with LED 🍫) - Anti-short cycle delay enabled
\$	ON	- Fans enabled
\$	Flashing	- Programming Phase (flashing with LED 貅) - Activation delay active
懋	ON	- Defrost active
懋	Flashing	- Drip time active
1234 H	ON	- Freezing cycle 1, 2, 3, 4 or hold mode active
1234 H	Flashing	- Instrument temporarily stop
(!)	ON	- Alarm signalling
AUX – AUX2	ON	- Aux or Aux2 enabled

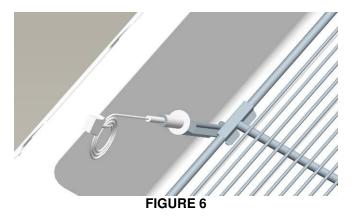
UNIT OPERATION, PRODUCT PLACEMENT AND MAXIMUM LOAD LEVELS FOR RAPID CHILLING AND RAPID THAW OPERATIONS For refrigeration and freezer operations consult instructions on Page 14 (FX-1 (2N1) Unit Operation) and for control operations consult pages 21 & 22

RAPID CHILLING OPERATION:

- To prevent damage to the insulated ABS insert due to hot pans, place accessory part number FX-SSTHAW-2, FX Stainless Steel shelves are recommended (see Figure 3). Place the shelves in the insert utilizing the (4) standoff brackets provided. The standoff brackets are designed to fit within the ribs of the insert (see Figure 4).
- 2. The **FX1-4N1 Rapid Chiller** is designed to rapidly cool food product that has been recently cooked, down to 40° F. To ensure quality and freshness of food, it is recommended that food be placed in 12"x20"x2-1/2" pans and then covered (see **Figure 5**).



 Before using the Rapid Chiller, allow the unit to pre-chill for approximately 15 minutes. To do this, turn the unit on by pressing the ON/OFF button (make sure to leave the unit empty for the pre-chill step) and set to cycle 1 **Refrigerator mode** (see instruction to set mode on **page 21**). Leave the product probe in the probe holder in the insert (see **Figure 6**). The unit will cycle and hold around 35° F.



FX1-4N1 Unit Operation con't

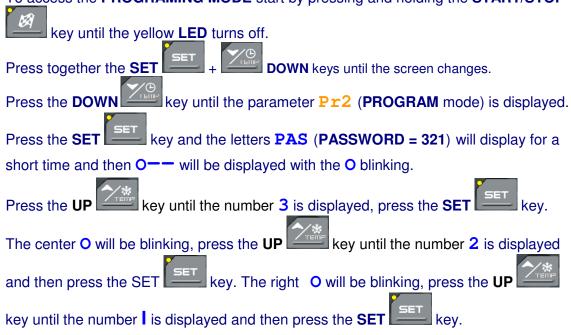
4. Place the cooked product in 12"x20"x2-1/2" deep pans and cover for quicker chill times. Place one pan on the bottom shelf as shown in **Figure 5** then set the second shelf on the bracket platforms and place the second pan on top of that shelf. Each pan holds approximately 11 lbs of product and each drawer holds two pans for a total of 22 lbs. More then 22 lbs will require longer cycle time to bring product below 40 °F.

5. HOW TO START THE RAPID CHILL CYCLE TIMED MODE

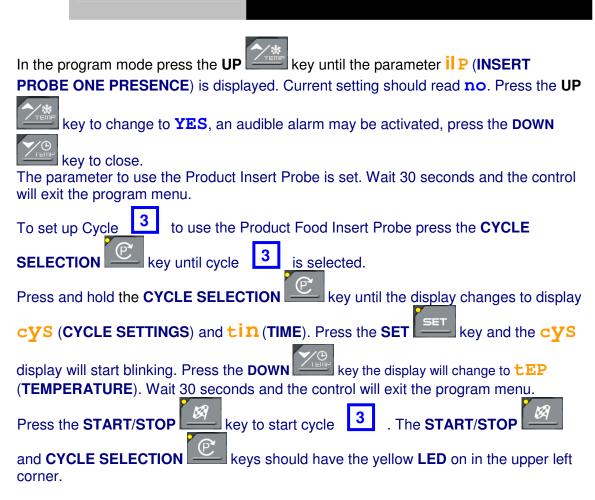
The control on your FX1-4N1 is factory set for Rapid Chill utilizing timed mode. The timer symbol will be illuminated indicating the timed mode is set. If this is the mode desired, proceed to the following steps to operate the **Rapid Chill Timed Mode**. Press and hold the **START/STOP** key until the yellow LED turns off. Press the **CYCLE SELECTION** key until cycle 3 is selected. Press the **START/STOP** key. The correspondent yellow LED is switched on.

The Rapid Chill mode is set and will run for 5 hours. The first 4 hours of the cycle the system is set to run at full capacity to cool the hot food quickly. The next hour is set at a temperature set point to stabilize the product temperature of below 40 °F. After the 5 hour cycle the system will automatically go into defrost (to clear the evaporator coil) followed by the hold cycle to maintain refrigerated temperatures of below 40 °F.

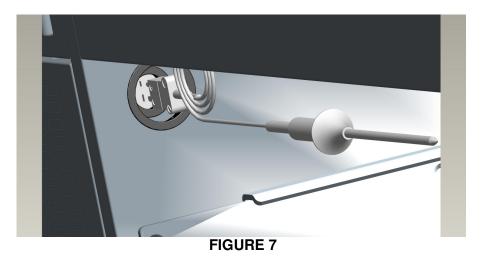
6. HOW TO SET THE RAPID CHILL CYCLE FOOD PRODUCT TEMPERATURE MODE The control on your FX1-4N1 is factory set for Rapid Chill Timed Mode. The following steps changes to a Product Temperature Mode. To access the **PROGRAMING MODE** start by pressing and holding the **START/STOP**



FX1-4N1 Unit Operation con't

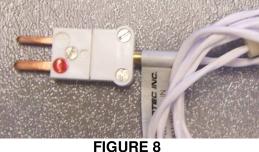


7. Insert the Product Probe plug into the receptacle found on the inside left side the cabinet (see **Figure 7**).



FX1-4N1 Unit Operation con't

8. The plug on the Product Probe has a positive (+) and negative (- in red) prongs that fits into the receptacle. The negative prong will be on the bottom as shown in **Figure 8**.



9. Simply insert the Product Probe into the hot product pan, in solid food pierce the product in the center making sure the probe does not touch the pan or interferes with the pan cover. In liquid foods place the probe in the center of the pan the Product Probe meets FDA and NSF standards for food contact materials. The Product Probe wire will slide easily between the insulated insert and the Evaporator Lid assembly gasket. (see **Figure 9**)



FIGURE 9

10. HOW TO START THE RAPID CHILL FOOD PRODUCT TEMPERATURE MODE

Press and hold the **START/STOP** key until the yellow LED turns off.

Press the **CYCLE SELECTION** key until cycle **3** is selected.

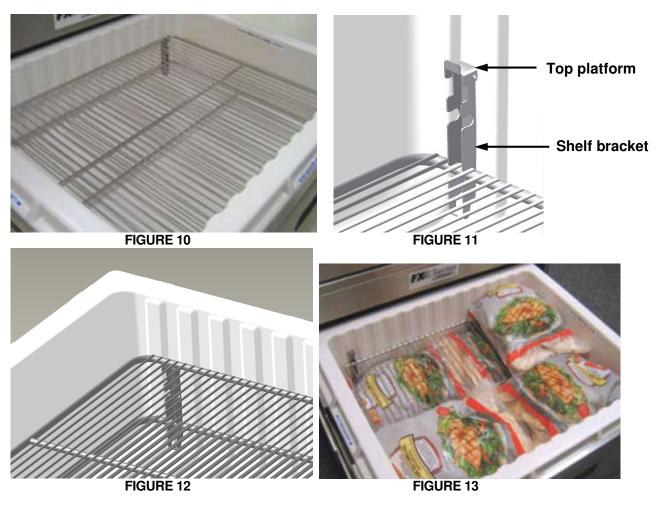
Press the **START/STOP** key. The correspondent yellow **LED** is switched on.

The Rapid Chill based product temperature mode is set and will run until food product temperatures reach below 40 °F. The system will automatically go into defrost (to clear the evaporator coil) followed by the hold cycle to maintain refrigerated temperatures of below 40 °F.

11. Clean and sanitize the Product Probe after each use. When not in use insert probe in Probe bracket inside the insert as shown in **Figure 6**, **page 23**.

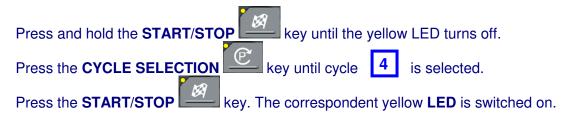
RAPID THAW OPERATION:

1. To efficiently thaw product quickly, accessory part number **FX-SSTHAW-2**, FX Stainless Steel shelves are recommended (see **Figure 10**). Place one shelf in the insert utilizing the (4) standoff brackets provided. Standoff brackets are designed to fit within the ribs of the insert (see **Figure 11**). The Standoff bracket top platform supports the second shelf (see **Figure 12**).



- The FX1-4N1 Rapid Thawing Mode is designed to rapidly slack (defrost) frozen food products safely to refrigerated temperatures of 35 - 40°F. The FX1-4N1 safely thaws 20 lbs of frozen product in approximately 6 hours while maintaining product temperatures below 40°F and then holds the product automatically in refrigerated mode.
- 3. For best results place the frozen product either in its original packaging or in containers such as 12"x20"x21/2" size pans, on the bottom and top shelf as shown in **Figure 13**). Spacing the product helps the speed up the thawing process. When using containers its best to cover the product to keep them from drying out.

1. HOW TO START THE RAPID THAW CYCLE



The Rapid Thaw mode is set and will run for 6 hours. During this 6 hour cycle the temperature display on the control may reach above $40 \,^{\circ}$ F but should not exceed $46 \,^{\circ}$ F. The product should not be above $40 \,^{\circ}$ F during this cycle. After the 6 hour cycle the system will automatically go into the hold cycle to maintain refrigerated temperatures of below $40 \,^{\circ}$ F.

Randell strongly suggests a preventive maintenance program which would include the following **Monthly** procedures:

1. Cleaning of all condenser coils. Condenser coils are a critical component in the life of the compressor and must remain clean to assure proper air flow and heat transfer. Failure to maintain this heat transfer will affect unit performance and eventually destroy the compressor. Clean the condenser coils with coil cleaner and/or a vacuum, cleaner and brush.

NOTE: Brush coil in direction of fins, normally vertically as to not damage or restrict air from passing through condenser.

2. Clean fan blade on the condensing unit.

3. Clean and disinfect drains with a solution of warm water and bleach.

4. Clean and disinfect drain lines and evaporator pan with a solution of warm water and bleach.

5. Clean all gaskets on a weekly if not daily basis with a solution of warm water and a mild detergent to extend gasket life.

NOTE: DO NOT USE SHARP UTENSILS.

CLEANING AGENT JOB COMMENTS Soap, ammonia, detergent Routine cleaning Apply with a sponge or cloth Medallion Fingerprints and smears Arcal 20, Lac-O-Nu, Ecoshine Provides a barrier film Cameo, Talc, Zud, First Rub in the direction of the Stubborn stains and discoloration Impression polish lines Greasy and fatty acids. Easy-Off, Degrease It, Oven Excellent removal on all blood, burnt-on foods finishes Aid Any good commercial Grease and Oil Apply with a sponge or cloth detergent Restoration/Preservation Benefit, Super Sheen Good idea monthly

RECOMMENDED CLEANERS FOR YOUR STAINLESS STEEL INCLUDE THE FOLLOWING:

Reference: Nickel Development Institute, Diversey Lever, Savin, Ecolab, NAFEM.

NOTE: Do not use steel pads, wire brushes, scrapers, or chloride cleaners to clean your stainless steel. CAUTION: DO NOT USE ABRASIVE CLEANING SOLVENTS, AND NEVER USE HYDROCHLORIC ACID (MURIATIC ACID) ON STAINLESS STEEL.

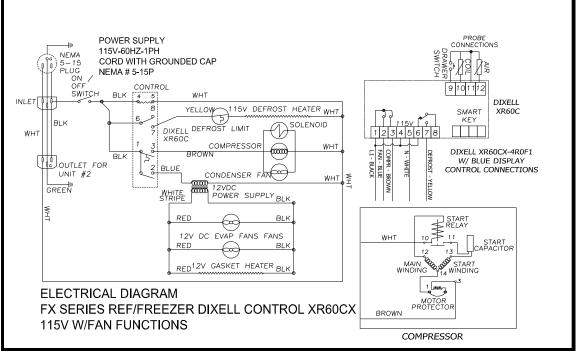
NOTE: Do not pressure wash equipment as damage to electrical components may result.

Proper maintenance of equipment is the ultimate necessity in preventing costly repairs. By evaluating each unit on a regular schedule, you can often catch and repair minor problems before they completely disable the unit and become burdensome on your entire operation.

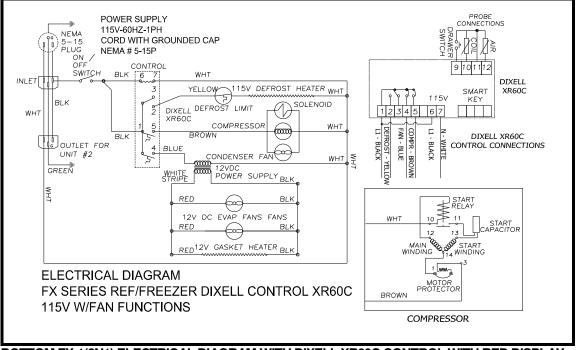
For more information on preventive maintenance, consult your local service company or CFESA member. Most repair companies offer this service at very reasonable rates to allow you the time you need to run your business along with the peace of mind that all your equipment will last throughout its expected life. These services often offer guarantees as well as the flexibility in scheduling or maintenance for your convenience.

Randell believes strongly in the products it manufactures and backs those products with one of the best warranties in the industry. We believe with the proper maintenance and use, you will realize a profitable return on your investment and years of satisfied service.

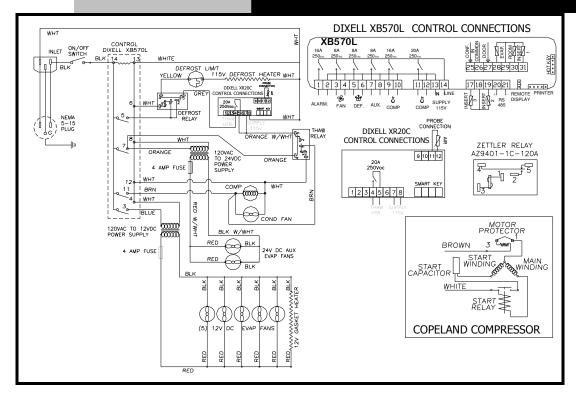
FX-1 (2N1) Electrical Diagram



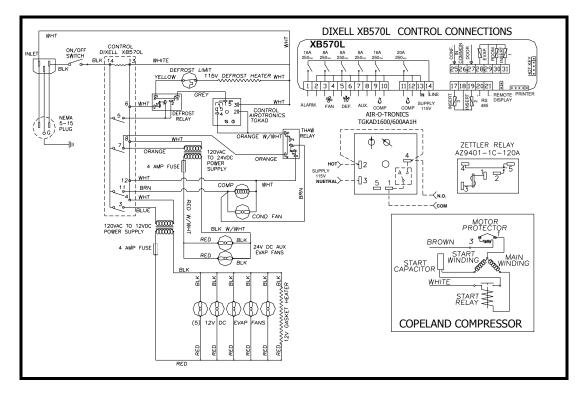
TOP FX-1(2N1) ELECTRICAL DIAGRAM WITH DIXELL XR60CX CONTROL WITH BLUE DISPLAY



BOTTOM FX-1(2N1) ELECTRICAL DIAGRAM WITH DIXELL XR60C CONTROL WITH RED DISPLAY



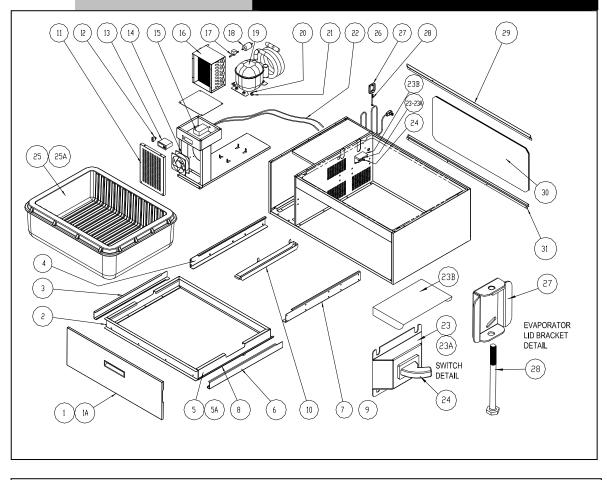
TOP FX1-4N1 ELECTRICAL DIAGRAM WITH DIXELL XR20C CONTROL



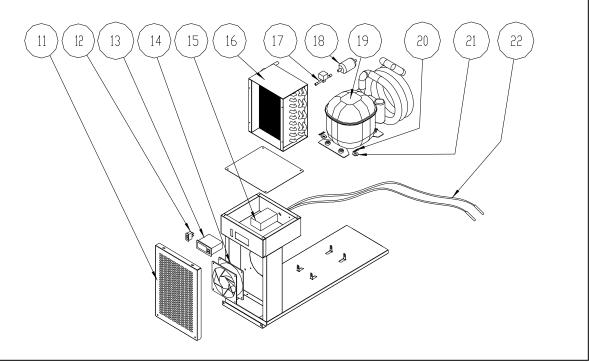
BOTTOM FX1-4N1 ELECTRICAL DIAGRAM WITH AIR-O-TRONICS CONTROL

SYMPTOM	POSSIBLE CAUSE	PROCEDURE
Unit doesn't run	1. No power to unit	1. Plug in unit
	2. Power switch in OFF position	2. Switch power switch to ON
	3. Temperature control turned off	3. Check temperature control
	4. Temperature control faulty	4. Test temperature control
	5. Compressor overheated	5. Clean condenser coil
	6. Condenser fan faulty	6. Service condenser fan
	7. Overload protector faulty	7. Test overload
	8. Compressor relay faulty	8. Test relay
	9. Drawer switch not engaged	9. Test drawer switch
	10. Compressor faulty	10 Call for service at 800-621-8560
Unit short cycles	1. Condenser coil dirty	1. Clean coil
	2. Condenser fan faulty	2. Service fan and motor.
	3. Compressor faulty	3. Call for service at 800-621-8560
	4. Overload repeatedly tripping	4. Check outlet voltage
Unit runs constantly	1. Condenser coil dirty	1. Clean coil
	2. Condenser fan faulty	2. Service condenser motor
	3. Room ambient too high	3. Reduce room temp to 75F
	4. Room humidity too high	4. Set room lower
Unit not cold enough	1. Temp control set too high	1. Adjust control to lower setting
	2. Temperature control faulty	2. Test control
	3. Condenser coil dirty	3. Clean coil
	4. Refrigerant leaking or contaminated	4. Call for service at 800-621-8560
	5. Room ambient too high	5. Reduce room temp to 75F
	6. Room humidity too high	6. Set room lower
	7. Insert cavity is over-filled	7. Load items to level indicated on sides of insert.
Unit too cold	1. Temperature control set too low	1. Adjust control to raise setting
	2. Temperature control faulty	2. Test control
Unit noisy	1. Compressor mountings loose or hardened.	1. Tighten or replace compressor mountings
,	 Condenser fan damaged or hitting fan shroud 	2. Inspect condenser fan
	1. Drawer is open	1. Close the drawer the unit is designed to shut down when drawer is open.
Control flashing "dA"		·
alarm	2. Drawer switch failed	Call for service at 800-621-8560

FX-1 (2N1) SERIES REFRIGERATION SYSTEMS



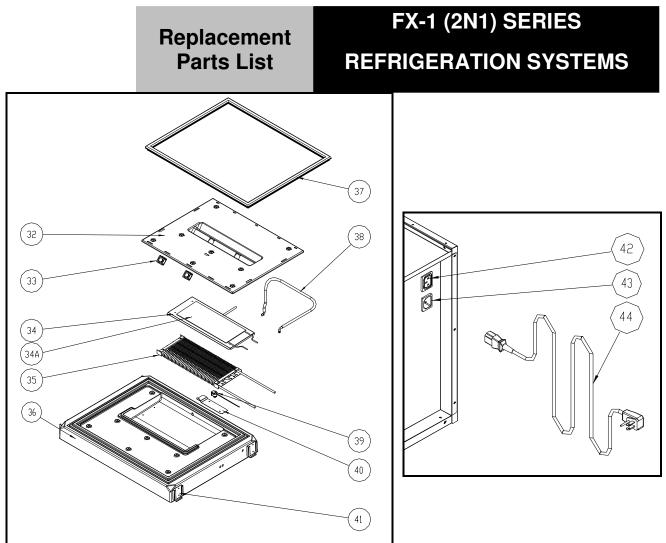
Replacement Parts List



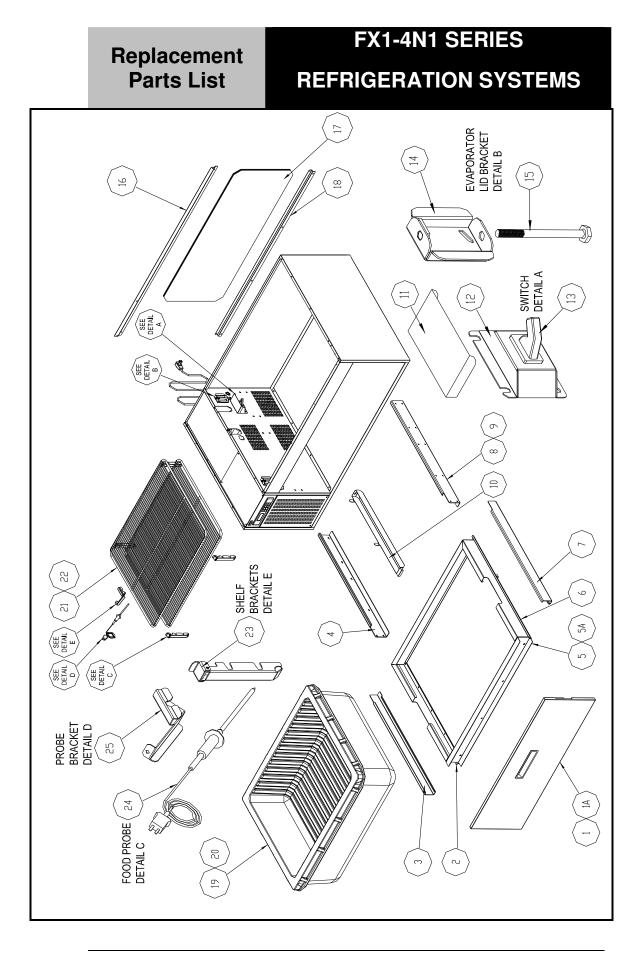
FX-1 (2N1) SERIES

REFRIGERATION SYSTEMS

ITEM	DESCRIPTION	PART #
1	DRAWER FRONT PANEL	RP FRT0602
1A	DRAWER FRONT PANEL, AFTER SERIAL T55342-1	RP FRT0701
2	DRAWER SLIDE LEFT TOP EXT (AVAILABLE AS SET ONLY)	HD TRK0602
3	DRAWER SLIDE MIDDLE PIECE LEFT (AVAILABLE AS SET ONLY)	HD TRK0602
4	DRAWER SLIDE MOUNTING PIECE LEFT (AVAILABLE AS SET ONLY)	HD TRK0602
5	DRAWER CARRIAGE FRAME	RP FRM0604
5A	DRAWER CARRIAGE FRAME, AFTER SERIAL T55342-1	RP FRM0702
6	DRAWER SLIDE MIDDLE PIECE RIGHT (AVAILABLE AS SET ONLY)	HD TRK0602
7	DRAWER SLIDE MOUNTING PIECE RIGHT (AVAILABLE AS SET ONLY)	HD TRK0602
8	DRAWER SLIDE RIGHT TOP EXT (AVAILABLE AS SET ONLY)	HD TRK0602
	DRAWER SLIDE TRACK ASSEMBLY COMPLETE LEFT AND RIGHT	
9	SET. STAINLESS STEEL	HD TRK0602
10		RP CPN0601
11		RP LVR0616
12	SWITCH, ROCKER RSCA201-VB-B-1VN	EL SWT0502
13	DIXELL CONTROL, 115V, XR60, COMPR, DEFROST, FAN RELAY	RF CNT0604
14	CONDENSER FAN. AXIAL, 127 X 38MM 120 CFM,115V	RF FAN0601
15	POWER SUPPLY, 115V TO 12VDC, 14.4VA MIN	EL TRN0601
16	CONDENSER COIL, 3.46"x9.00"x5.90" 1x.866, 3/8 TUBE	RF COI0602
17	SOLENOID, VALVE & 120V COIL 063455 ALCO 50RBT22SML N*	RF SOL9801
18	DRYER, 1/4"FILTER W/2 ND 1/4 INEKPGD62741032S N*	RF FLT251
19	COMPRESSOR, R404A, 3/8 LO, 115V DANFOSS NF5.5CLX	RF CMP0601
20	PIN, HAIR COTTER, WIRE .072D L=1-1/8" ZINC PLATED	HD PIN0601
21	WASHER, 3/8" FLAT ZINC	FA WSH056
22	PROBE, DIXELL NTC DEFROST & FAN RELAY W/ 8' BLACK LEADS	RF CNT0505
23	SWITCH BOX	RP SWT0601
23A	SWITCH BOX, AFTER SERIAL T55342-1	RP SWT0701
23B	DRAWER SWITCH COVER	RP CVR0702
24	SWITCH, DRAWER, 1" ACUATOR	EL SWT0601
25	INSULATED DRAWER INSERT	HD PAN0601
25A	INSULATED DRAWER INSERT, AFTER SERIAL T55342-1	RP PAN0705
26	CAP TUBE ASSY W/ 3/8" SUCTION LINE, .031X.081 X 236" LONG (NOT SHOWN ON PARTS DRAWING)	RP TUB0602
27	BASE BRACKET W/SPOT NUT FOR LID ASSEMBLY FX SERIES	RP BRK0703
28	BOLT, 1/4-20 X 3.5" SHOULDER BOLT HEX HED ZINC W/3/4 PATCH	FA BLT0701
29	COUNTERWEIGHT TOP CLIP FX SERIES	RP CLP0703
30	COUNTERWEIGHTS (3) PIECES FX SERIES	RP WGT0701
31	COUNTERWEIGHT BOTTOM CLIP FX SERIES	RP CLP0704



ITEM	DESCRIPTION	PART #
32	EVAPORATOR COIL LID ASSEMBLY	RP CSY0601
33	COIL, EVAP, 1.50"x4.00"x15.75" 1x.75, 3/8 TUBE, STAGED FIN	RF COI0603
34	EVAPORATOR DRAIN PAN WITH DEFROST HEATER	RP DRP0602
34A	FOIL DEFROST HEATER	EL PAD0601
35	FAN. AXIAL, 40 X 20MM 10.8 CFM,12VDC EVAPORATOR	RF FAN0602
36	DIFFUSER, FAN MOUNTING PLATE	RP DIF0601
37	GASKET, MAGNETIC, SLIDE SEAL, 29.53" X 23.43" (750 X 595mm)	IN GSK0604
38	HOSE, .375" ID X 1/2" OD POLYETHYLENE FLEXIBLE TUBE W/ELBOW	RP HSE0601
39	THERMODISC 2-WIRE, OPEN:70 CLOSE:50	RF TRM0501
40	THERMODISC BRACKET FX SERIES	RP BRK0704
41	LID MOUNTING BRACKETS FX SERIES	RP BRK0705
42	RECEPTACLE, SNAP-IN, IEC320, 10A, 250V, 1/4" QUICK CONNECTS	EL REC0601
43	PLUG, SNAP-IN, IEC320, 10A, 250V, 1/4" QUICK CONNECTS	EL PLG0601
44	POWER CORD, IEC320 10A FEMALE TO 5-15P 90 ON SIDE, 16-3 SJ*O	EL WIR0602



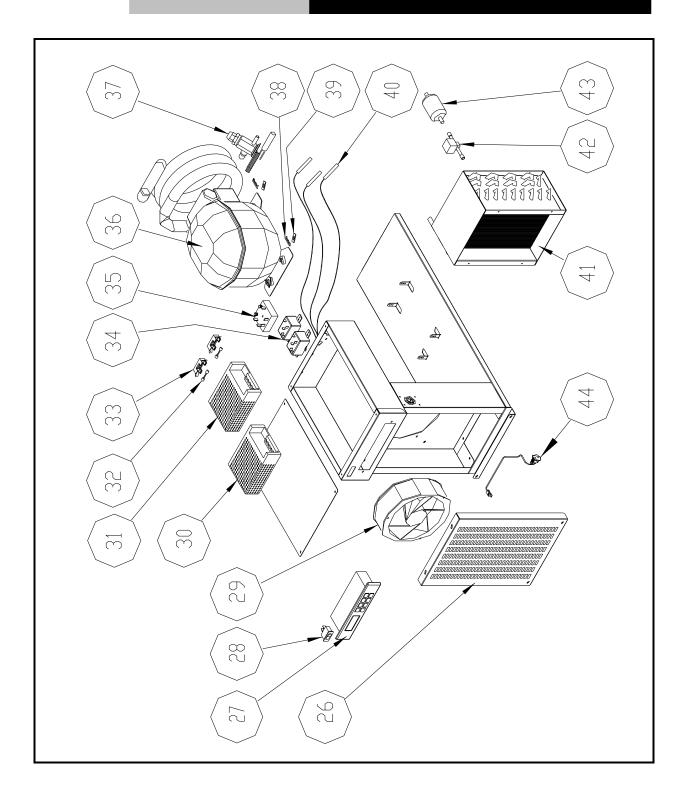
888-994-7636

FX1-4N1 SERIES

REFRIGERATION SYSTEMS

ITEM	DESCRIPTION	PART #
1	DRAWER FRONT PANEL	RP FRT0602
1A	DRAWER FRONT PANEL, AFTER SERIAL T55342-1	RP FRT0701
2	DRAWER SLIDE LEFT TOP EXT (AVAILABLE AS SET ONLY)	HD TRK0602
3	DRAWER SLIDE MIDDLE PIECE LEFT (AVAILABLE AS SET ONLY)	HD TRK0602
4	DRAWER SLIDE MOUNTING PIECE LEFT (AVAILABLE AS SET ONLY)	HD TRK0602
5	DRAWER CARRIAGE FRAME	RP FRM0604
5A	DRAWER CARRIAGE FRAME, AFTER SERIAL T55342-1	RP FRM0702
6	DRAWER SLIDE MIDDLE PIECE RIGHT (AVAILABLE AS SET ONLY)	HD TRK0602
7	DRAWER SLIDE MOUNTING PIECE RIGHT (AVAILABLE AS SET ONLY)	HD TRK0602
8	DRAWER SLIDE RIGHT TOP EXT (AVAILABLE AS SET ONLY)	HD TRK0602
9	DRAWER SLIDE TRACK ASSEMBLY COMPLETE LEFT AND RIGHT SET. STAINLESS STEEL	HD TRK0602
10	CONDENSATE DRAIN PAN	RP CPN0601
11	DRAWER SWITCH COVER	RP CVR0702
12	SWITCH BOX	RP SWT0601
12A	SWITCH BOX, AFTER SERIAL T55342-1	RP SWT0701
13	SWITCH, DRAWER, 1" ACUATOR	EL SWT0601
14	BASE BRACKET W/SPOT NUT FOR LID ASSEMBLY FX SERIES	RP BRK0703
15	BOLT, 1/4-20 X 3.5" SHOULDER BOLT HEX HED ZINC W/3/4 PATCH	FA BLT0701
16	COUNTERWEIGHT TOP CLIP FX SERIES	RP CLP0703
17	COUNTERWEIGHTS (3) PIECES FX SERIES	RP WGT0701
18	COUNTERWEIGHT BOTTOM CLIP FX SERIES	RP CLP0704
19	INSULATED DRAWER INSERT	HD PAN0601
20	INSULATED DRAWER INSERT, AFTER SERIAL T55342-1	RP PAN0705
21	FX S/S THAW RACKS ONE SET PER UNIT (OPTIONAL ACCESSORY)	FX-SSTHAW-2
22	SHELF, 26x21" SS WIRE (OPTIONAL ACCESSORY)	HD SHL2002
23	STACKING THAW RACK BRACKETS (OPTIONAL ACCESSORY)	RP BRK0713
24	PROBE, FX1-4N1 BLAST CHILLER FOOD PROBE (OPTIONAL ACCESSORY)	HD PRB0701
25	BRACKET, FOOD PROBE FX1-4N1 (OPTIONAL ACCESSORY)	RP BRK0712

FX1-4N1 SERIES REFRIGERATION SYSTEMS

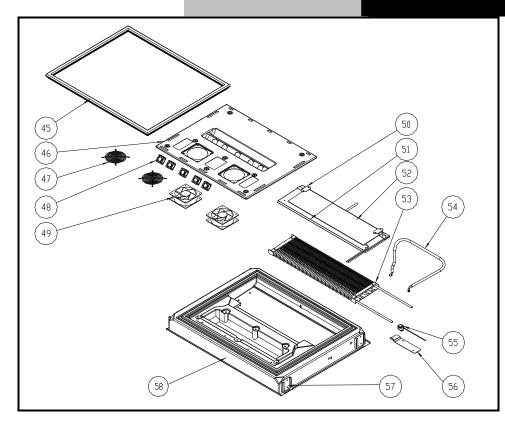


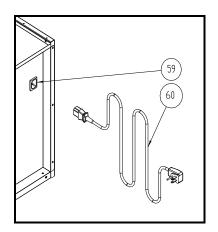
FX1-4N1 SERIES

REFRIGERATION SYSTEMS

ITEM	DESCRIPTION	PART #
26	LOUVER FRONT PANEL	RP LVR0616
27	CONTROL, DIXELL, 115V, XB570L-4N0F1, FX RAPID CHILL BLUE LED	RF CNT0703
28	SWITCH, ROCKER RSCA201-VB-B-1VN	EL SWT0502
29	CONDENSER FAN, AXIAL 172 X 150 X 55 MM 293CFM 115V	RF FAN0701
30	POWER SUPPLY, 85-264Vac TO 12Vdc 3.3A OUTPUT 40W 60C OPERATION	EL TRN0705
31	POWER SUPPLY, 85-264Vac TO 24Vdc 1.7A OUTPUT 40W 60C OPERATION	EL TRN0706
32	FUSE, MINATURE 4AMP LIF 4A 3AG 313004P	EL FUS0701
33	FUSE, HOLDER QUICK CONNECT 87F1574 NEWARK SERIES S-8000	EL FUS0301
34	RELAY, 16 A, 120V COIL ZETTLER # AZ9401-1C-120A	EL RLY0701
35	CONTROL, TIMER 10A - 120V AIR-O-TRONICS # TGKAD1600/600AA1H	RF CNT0706
36	COMPRESSOR, 1/3HP/8.78CC LO 404A 115V COPELAND AFE11C3E-IAA	RF CMP0701
37	VALVE, 1/8 TON R404 EXPANSION MOP	RF VLV0701
38	PIN, HAIR COTTER, WIRE .072D L=1-1/8" ZINC PLATED	HD PIN0601
39	WASHER, 3/8" FLAT ZINC	FA WSH056
40	PROBE, DIXELL NTC DEFROST & FAN RELAY W/ 8' BLACK LEADS	RF CNT0505
41	CONDENSER COIL, 3.46"x9.00"x5.90" 1x.866, 3/8 TUBE	RF COI0602
42	SOLENOID, VALVE & 120V COIL 063455 ALCO 50RBT22SML N*	RF SOL9801
43	DRYER, 1/4"FILTER W/2 ND 1/4 INEKPGD62741032S N*	RF FLT251
44	WIRE, FOOD PROBE EXT CAB-02T2-U72iRC	EL WIR0222

FX1-4N1 SERIES REFRIGERATION SYSTEMS

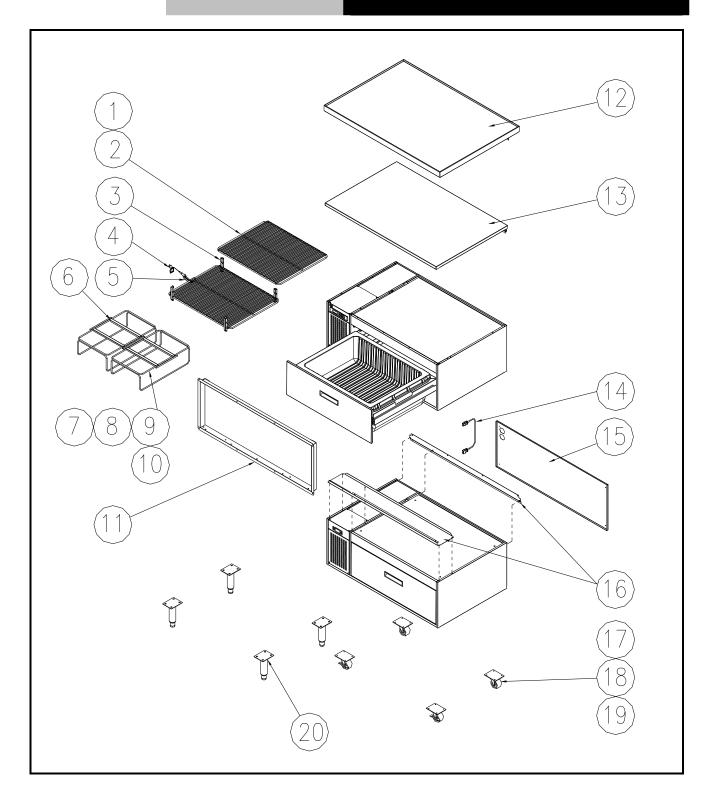




ITEM	DESCRIPTION	PART #
45	GASKET, MAGNETIC, SLIDE SEAL, 29.53" X 23.43" (750 X 595mm)	IN GSK0604
46	DIFFUSER, LID FOR FX-4N1	RP DIF0701
47	FAN GUARD, NICKEL CHROME FINISH WIRE 116MM RND SGR-47	RF FAN0703
48	FAN. AXIAL, 40 X 20MM 10.8 CFM,12VDC EVAPORATOR	RF FAN0602
49	FAN, AXIAL 120 X 120 X 44MM 140 CFM 24V DC W/ 12" FAN CORD	RF FAN0702
50	DRAIN PAN BRACKET FX1-4N1	RP BRK0711
51	EVAPORATOR DRAIN PAN WITH DEFROST HEATER FOR FX1-4N1	RP DRP0701
52	FOIL PAD, 6" X 23" DEFROST HEATER 300W 120V	EL PAD0701
53	COIL, 1.00" X 7.00" X 23.75" STAGED FIN EVAPORATOR FX 4N1	RF COI0701
54	HOSE, .375" ID X 1/2" OD POLYETHYLENE FLEXIBLE TUBE W/ELBOW	RP HSE0601
55	THERMODISC 2-WIRE, OPEN:70 CLOSE:50	RF TRM0501
56	THERMODISC BRACKET FX SERIES	RP BRK0704
57	LID MOUNTING BRACKETS FX SERIES	RP BRK0705
58	EVAPORATOR COIL LID ASSEMBLY FOR FX1-4N1	RP CSY0704
59	PLUG, SNAP-IN, IEC320, 10A, 250V, 1/4" QUICK CONNECTS	EL PLG0601
60	POWER CORD, IEC320 10A FEMALE TO 5-15P 90 ON SIDE, 16-3 SJ*O	EL WIR0602

FX SERIES

OPTIONAL ACCESSORY PARTS



FX SERIES

Replacement Parts List

OPTIONAL ACCESSORY PARTS

CON'T

ITEM	DESCRIPTION	PART #
1	FX S/S THAW RACKS ONE SET PER UNIT (OPTION)	FX-SSTHAW-2
2	SHELF, 26x21" SS WIRE (OPTION)	HD SHL2002
3	STACKING THAW RACK BRACKETS (OPTION)	RP BRK0713
4	PROBE, FX1-4N1 BLAST CHILLER FOOD PROBE (OPTION)	HD PRB0701
5	BRACKET, FOOD PROBE FX1-4N1 (OPTION)	RP BRK0712
6	PAN DIVIDER BAR LOCK-IN STYLE FX SERIES (OPTION)	RP BAR0702
7	RACK- POWER COATED TO HOLD ONE 12x20 PAN (OPTION)	FX-PCRACK-1
8	RACK- POWER COATED TO HOLD TWO 12x20 PANS (OPTION)	FX-PCRACK-2
9	RACK- SS TO HOLD ONE 12x20 PAN (OPTION)	FX-SSRACK-1
10	RACK- SS TO HOLD TWO 12x20 PAN (OPTION)	FX-SSRACK-2
11	FX FLANGE KIT (OPTION)	FX-FLANGE
12	CHEFS STATION COOK TOP FOR FX-1CS UNITS (OPTION)	FX-1CSTOP
13	WORK SURFACE TOP FOR FX-WS UNITS (OPTION)	FX-WSTOP
14	JUMPER CORD, 1M, 16/3 SJ*O IEC320 13A TO IEC320 13A (OPTION)	EL WIR0606
15	STAINLESS STEEL BACK FOR FX-1 UNITS (OPTION)	FX-1SSBCK
16	FX SERIES STACKING KIT INCLUDES JUMPER CORD (OPTION)	FX-STX
17	CASTERS, 3" FULL SET OF 4 (OPTION)	FXCAS3IN
18	CASTERS, 4" FULL SET OF 4 (OPTION)	FXCAS4IN
19	FX SERIES CASTER KIT (SET OF FOUR 4.25" HIGH) (OPTION)	FX-CAS
20	FX SERIES LEG SET (SET OF FOUR 6" LEGS) (OPTION)	FX-LEG

NOTES