

Technical Manual

Installation, Operation, and Maintenance Instructions

Modular Freezer
F41-2M-SN-MLR

Cospolich Refrigerator Company, Inc.
Destrehan, LA 70047
800-423-7761



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Chapter 1

General Information

1.1 Introduction

This technical manual provides information for the installation, operation, maintenance, and inspection of this unit manufactured by Cospolich, Inc., Norco, Louisiana. A complete parts breakdown is also provided.

1.2 Scope of the Manual

This manual provides sufficient information for maintenance of the equipment.

1.3 Equipment Description

The unit consists of the following parts:

- a. Storage compartment – The insulated food storage compartment is clear storage area. Included in this area are the adjustable shelves, an interior light (for refrigerators), and the cooling coil.
- b. Doors – Access to the storage compartment is through a hinge-mounted, insulated door(s). The door is fully “gasketed” to provide a tight seal.
- c. Condensing Unit Compartment – This area contains the condensing unit(s) along with the necessary controls and other components.
- d. Evaporator Coil – The evaporator coil is located in the storage compartment and is responsible for distributing the cold air associated with the refrigeration system.
- e. Cabinet – The cabinet is the enclosure in which all of the above mentioned items are housed.

1.4 Equipment Supplied

The unit is shipped from the factory fully assembled except for the adjustable shelving that will require positioning on the pilaster standards as needed. The complete assembly is palletized and crated to minimize the possibility of damage

in shipping and storage. See Appendix A for assembly and installation instructions for Modular units.

Table 1.1 – Leading Particulars

<i>Manufacturer:</i>	Cospolich, Inc. Destrehan, Louisiana 70047
<i>Type:</i>	Marine Freezer Unit
<i>Model Number:</i>	F41-2M-SN-MLR
<i>Refrigerant:</i>	R404A
<i>Purpose:</i>	Storage of Frozen Food Items
<i>Power Supply:</i>	115 Volts AC
<i>Operating Current:</i>	14.3 Amps
<i>Maximum Power Demand:</i>	20 Amps
<i>Drain Requirements:</i>	None
<i>Shipping Weight:</i>	765 lbs.
<i>Operating Weight:</i>	708 lbs.
<i>Volume (crated):</i>	84 cu. Ft.

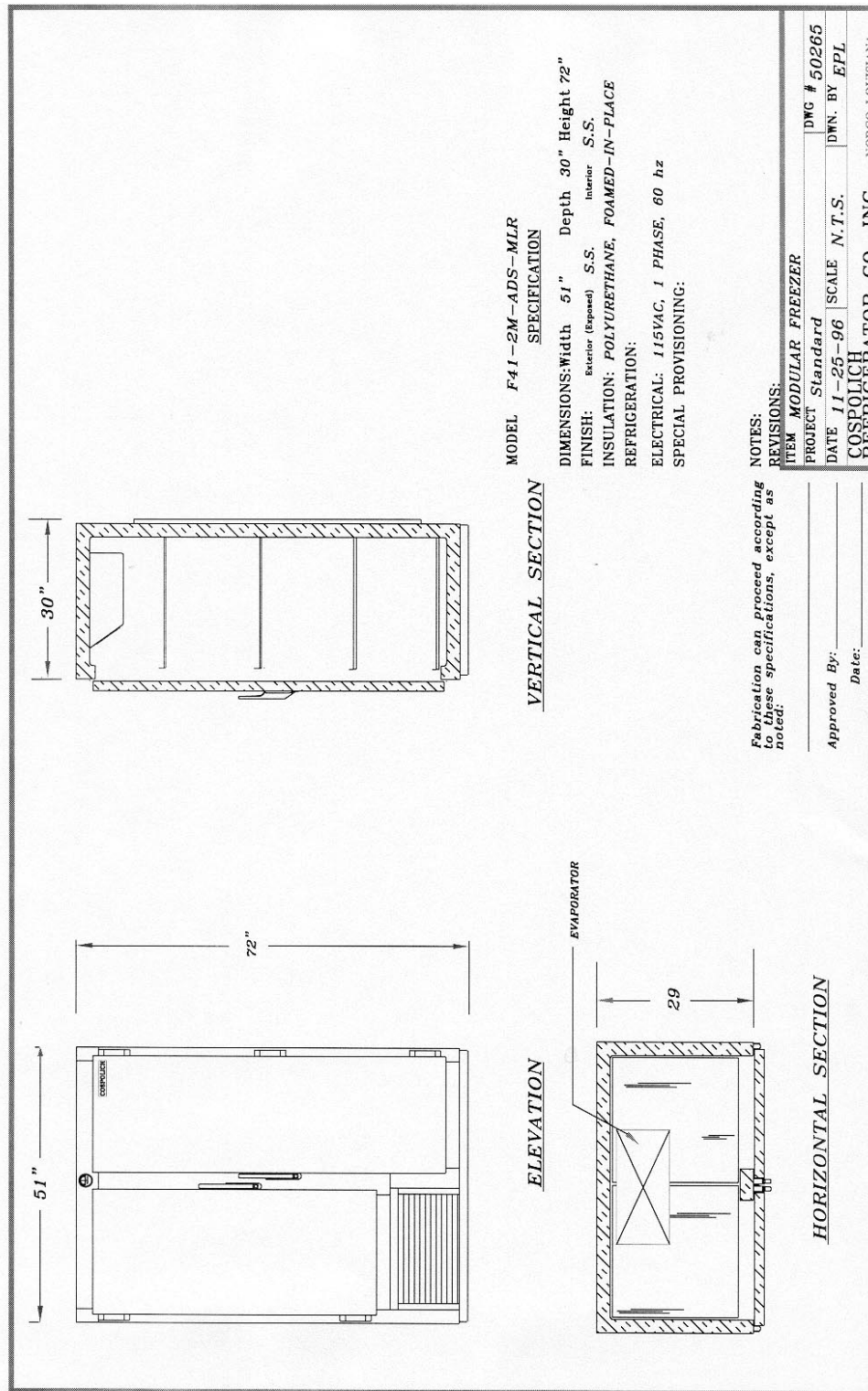


Figure 1.1 – General Arrangement Drawing

Chapter 7

Parts Lists

7.1 Introduction

This section of the manual contains lists of replaceable parts. Each of the tables contains a list of removable parts associated with an assembly of the cabinet or refrigeration system. No parts identification has been provided for details of permanently assembled items or those that are not suitable for field repair.

7.2 Source Codes

The sources for some items are shown in Table 7.1 below.

Table 7.1 – Vendor Source Codes

<u>Code Number</u>	<u>Name</u>	<u>Address</u>
14852	Bohn Heat Transfer	Danville, IL 61932
32761	Kason Industries	Shenandoah, GA 30265
50992	Ranco Controls	St. Louis, MO 63143
78462	Spporlan Valve	St. Louis, MO 63143
14569	Copeland Corporation	Sidney, OH 45365
17529	Watsco	Hialeah, FL 33010
59431	Tecumseh Products	Tecumseh, MI 49286
49048	Miljoco Corporation	Eastpointe, MI 48021
45020	Nashville Wire Products	Nashville, TN 37202
79264	Jean's Extrusions, Inc.	Salem, IN 47167
2K223	Refrigeration Hardware	Sun Valley, CA 91353
87518	Standard Keil, Inc.	Allenwood, NJ 08720
60886	Idec Corporation	Sunnyvale, CA 94089
19220	Eberhard, Inc.	Cleveland, OH 44136
66682	Cospolich, Inc.	Norco, LA 70079

Table 7.2, on the following page, is a parts list of special tools required for routine service.

Table 7.2 – Parts List – Special Tools List

<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
R1412	Refrigerant service gauges with hoses	1
VA70264	Service valve wrench	1
50992	Refrigerant	30 lbs.

Table 7.3 – Parts List

Parts List - Cabinet F41-2M-SN-MLR				
Item	Cosp #	Mfg #	Vendor	Qty
Latch	HXLH06	172BC	Kason	2
Hinge	HXHE02	217	Kason	5
Thermometer	RWTM01C	V20362002	Milijoco	1
Pilaster #1	HXSD36	65	Kason	6
Pilaster #2	HXSD48	65	Kason	2
Pilaster Clip	HXCS01	66	Kason	28
Shelves	SSW22BX23B	-	Cospolich	7
Gasket #1	GG64MV	-	Cospolich	1
Gasket #2	GG65MV	-	Cospolich	1
Mullion Heater #1	L1HR141H	-	Cospolich	1
Mullion Heater #2	L1HR167H	-	Cospolich	1

Parts List - Refrigeration F41-2M-SN-MLR				
Item	Cosp #	Mfg #	Vendor	Qty
Evaporator Coil Assy	RWE040	TA23SG	Heatcraft	1
Evaporator Motor	RWEM03	25300701	Heatcraft	1
Evaporator Fan	RWE5101B	5101B	Heatcraft	1
Expansion Valve	RWEV30	FS 1/2 Z	Sporlan	1
Thermostat	RWTT02	T6031A-1029	Honeywell	1
Defrost Timer	RWDT01	8145-00	Paragon	1
Condensing Unit	RUT520-2	M4CF-0050-IAA-212	Copeland	1
Compressor	RUT521	RS43C1E-IAA-100	Copeland	1
Condenser	RWCD37	066-0303-00	Copeland	1
Condenser Fan Blade	RWFB08	083-0130-00	Copeland	1
Condenser Fan Motor	RWCM28	050-0259-02	Copeland	1
Receiver	RWRT12	577-0346-02	Copeland	1
Start Capacitor	RWCP02	014-0008-74	Copeland	1
Run Capacitor	-	-	-	-
Relay	RWRLY02	040-0102-00	Copeland	1
Overload	RWOVL42	071-0329-15	Copeland	1
Filter Dryer	RWFD02	C-052-S	Sporlan	1
Sight Glass	RWSG01	SG-114	Watsco	1
Pressure Control	RWPL02	010-1483	Ranco	1
Power Control Switch	LWTS01	-	Cospolich	1
Terminal Box Assy	LT-001	-	Cospolich	1
Quick Connect Fitting 1/4"	RWQF0048	5500-4-8	Aeroquip	2
Quick Connect Fitting 3/8"	RWQF0068	5500-6-8	Aeroquip	2
Wire Harness	MT-003	-	-	1
Power Card	MT-004	-	-	1

Chapter 9

Electrical and Mechanical

9.1 Introduction

This section of the manual contains drawings and schematics of the electrical and mechanical piping systems.

9.2 Electrical Abbreviations and Terminology

a. RLA – Rated Load Amperage

1. Rated load amps is a measure of the current drawn by a compressor when operated at compressor manufacturer rating conditions at nominal voltage. This value is listed at U.L. and C.S.A. as “RLA”. It is in agreement with the N.E.C. definition that the RLA be the current draw when the compressor is delivering rated output.

b. LRA – Locked Rotor Amperage

1. The locked rotor amps of a compressor is the current value recorded three seconds after rated voltage is applied under locked rotor conditions from a 75 degree Fahrenheit motor soakout temperature (The voltage drop is to be predetermined and adjusted accordingly prior to testing). This value appears on the compressor serial plate and on all compressor statistics sheets.
2. It may be well to note that the practice in the past was to show an additional column marked, “LRA U.L. Test Report”. This is no longer needed since the U.L. investigation work, regarding component rating, will be guided by the compressor manufacturer’s published value.

c. MCC – Maximum Continuous Current

1. Maximum continuous current is a limiting ampere value that must not be greater than 156% of the RLA of the compressor as marked on the nameplate of the particular unit into which that compressor is applied.

Table 9.1 – Operating Pressures

Refrigerant: R-12			
Cabinet	Ambient	Suction Pressure	Head Pressure
-5 degrees F (Fre.)	90 degrees F	0-10 lbs.	120-150 lbs.
37 degrees F (Ref.)	90 degrees F	18-35 lbs.	120-150 lbs.
Refrigerant: R-22			
Cabinet	Ambient	Suction Pressure	Head Pressure
-5 degrees F (Fre.)	90 degrees F	10-15 lbs.	200-250 lbs.
37 degrees F (Ref.)	90 degrees F	37-67 lbs.	200-250 lbs.
Refrigerant: 134A			
Cabinet	Ambient	Suction Pressure	Head Pressure
-5 degrees F (Fre.)	90 degrees F	-5-10 lbs.	120-150 lbs.
37 degrees F (Ref.)	90 degrees F	16-37 lbs.	120-150 lbs.
Refrigerant: 404A			
Cabinet	Ambient	Suction Pressure	Head Pressure
-5 degrees F (Fre.)	90 degrees F	15-20 lbs.	250-300 lbs.
37 degrees F (Ref.)	90 degrees F	68-84 lbs.	250-300 lbs.

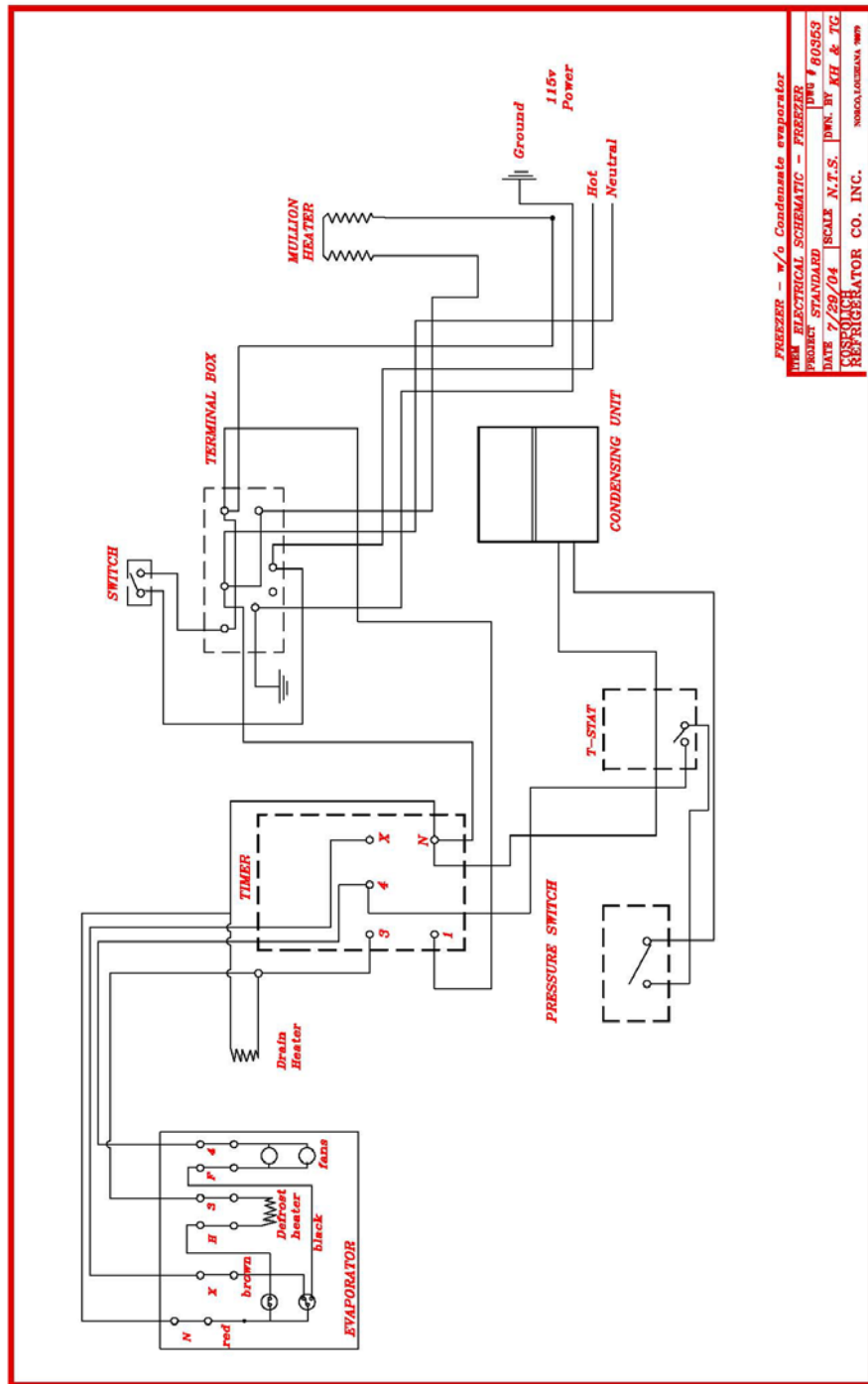


Figure 9.1 – Electrical Schematic

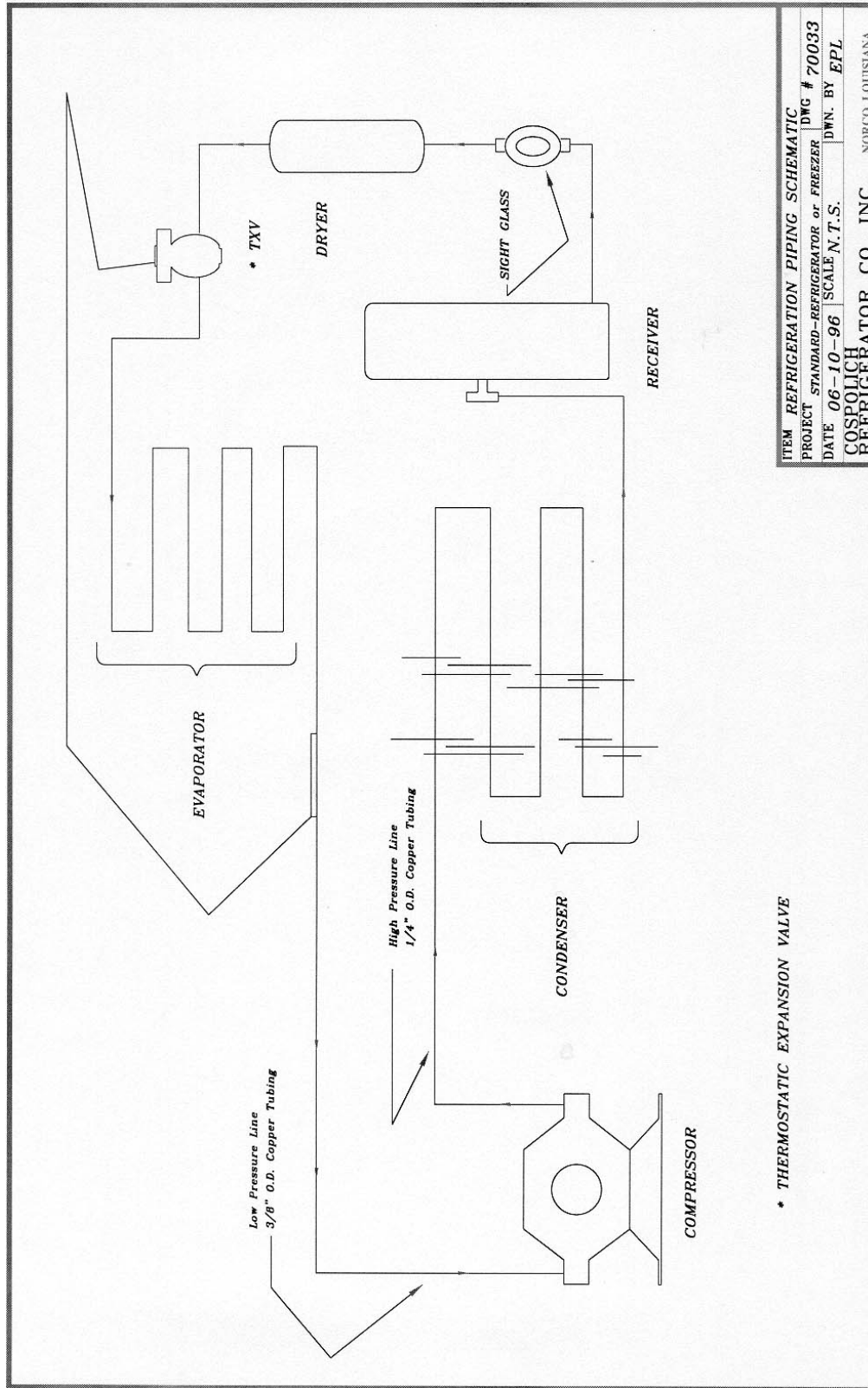


Figure 9.2 – Refrigeration Piping Schematic