

# Liebert Datamate: R-407C Parts Manual



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# Table of Contents

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<b>1. Product Description</b> .....	<b>1</b>
<b>2. Model Number Definition</b> .....	<b>2</b>
<b>3. Coil Section</b> .....	<b>3</b>
3.1. DX .....	3
3.2. CW .....	3
<b>4. Electrical Section</b> .....	<b>4</b>
4.1. Reheat and Humidifier .....	4
4.2. DBMP .....	5
<b>5. Humidifier Section</b> .....	<b>6</b>
5.1. Main Assembly .....	6
5.2. Humidifier Assembly .....	7
<b>6. Exterior Section</b> .....	<b>8</b>
<b>7. Piping Section</b> .....	<b>10</b>
7.1. Chilled Water .....	10
7.2. DX .....	11
7.3. Water In Assembly .....	11
7.4. Water Out Assembly .....	12
<b>8. Parts Gallery</b> .....	<b>13</b>
<b>9. Revision Page</b> .....	<b>15</b>

## 1. Product Description

The **DataMate** is a split system air or water/glycol cooled unit or self-contained chilled water unit.

The **evaporator section** includes the blower assembly, filter, microprocessor control, and electric reheat. All evaporator sections are 208/230 Volt 1-phase. A cooling-only model is also available.

**Air cooled units** - include the evaporator section plus one of the following condensing units. (Design ambient 95°F (35°C).)

**MCD Centrifugal fan unit** includes scroll compressor, factory mounted disconnect switch, condenser coil, centrifugal blower assembly, high pressure switch, Lee-temp head pressure control system, hot gas bypass, and filter drier. Unit must be mounted indoors. Duct flanges are provided. (See pricing for voltages).

**Prop fan unit** which includes scroll compressor, condenser coil, prop fan, high pressure switch, Lee-Temp head pressure control, filter dryer, hot gas bypass, and sight glass. Unit is designed for outdoor location (see pricing for voltages). (Consult the Prop Fan Condensing Unit Price Book for optional selections).

**DMC Water/Glycol** cooled includes the evaporator section plus a water/glycol cooled condensing unit which includes compressor, condenser, two-way water regulating valve, filter dryer, and sight glass. Design pressure is 1034 kpa (50 psi). Condensing unit is designed to mate up to evaporator section to create a self-contained system. (See pricing for voltages.)

Drycooler(s) and pump(s) selected separately.

**MCD Water/Glycol Condensing Unit** includes a scroll compressor, factory mounted disconnect switch, coaxial condenser, two-way or optional three-way water regulating valve, hot gas bypass, and filter drier. Design pressure is 150 psi (1034 kPa) or optional 350 psi (2413 kPa). (See pricing for voltages and complete model number). Drycooler(s) and pump(s) selected separately for applications using glycol loop. Drycooler and pump selected separately.

**Chilled water** fan/coil section includes chilled water coil and two-way slow close valve. Design pressure is 125 psi (862 kPa).

**Humidifier.** Steam-generating type with electronic control and automatic flushing circuit, humidification and dehumidification control, strainer, inlet drain, and solenoid valves and controls for humidification and dehumidification.

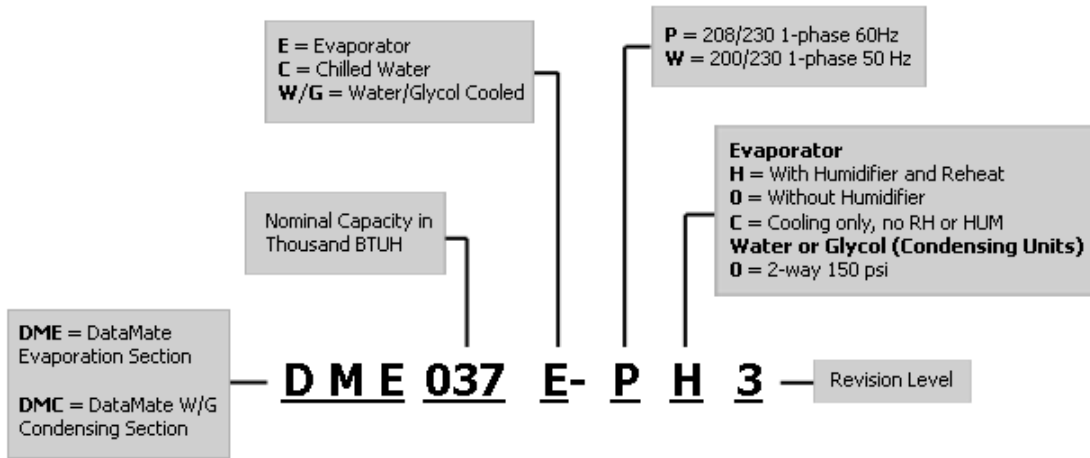
**Condensate Pump.** Can be field installed in the base of the unit. The pump is supplied with discharge check valve.

**Pre-charged refrigerant line set.** Contains an insulated copper suction line and a copper liquid line for interconnection of the indoor and outdoor sections. Available in 15 foot (4.5m) and 30 foot (9m) sections.

**Refrigerant-Line sweat adapter kit.** Contains two suction and two liquid line compatible fittings that allow field-supplied interconnecting refrigerant lines to be used. See Installation, Operation & Maintenance Manual for maximum recommended installed distances. Product Description March 2010 iii

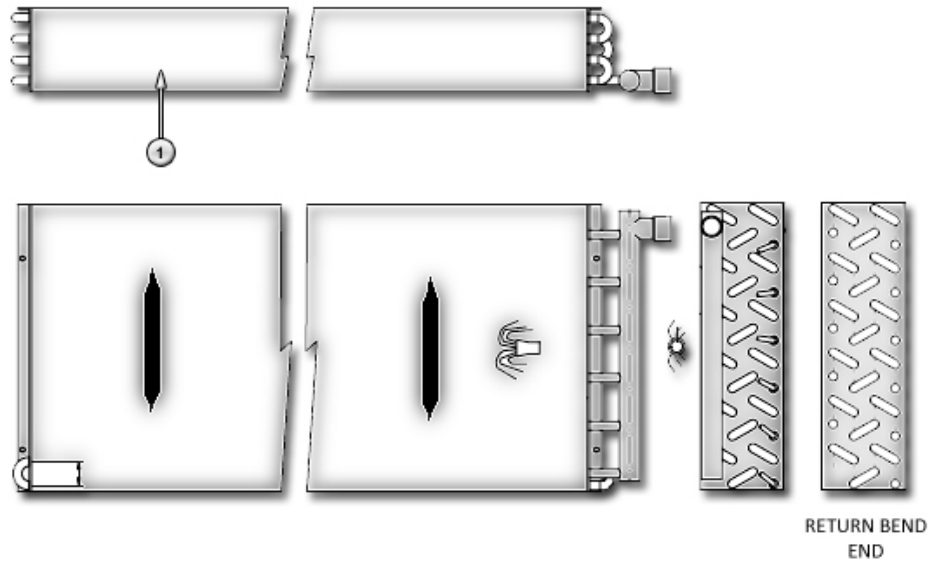
**277 Volt System** requires two field installed transformers (37.5 amps each). One for evaporator module and one for condensing module. For self-contained water/glycol system: consult factory for required transformer. The transformer is epoxy encapsulated and is suitable for indoor/outdoor installation.

## 2. Model Number Definition



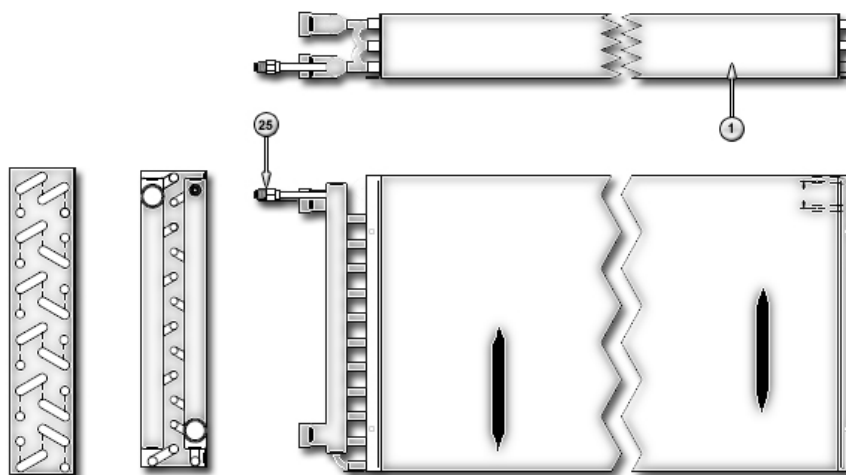
### 3. Coil Section

#### 3.1. DX



Item	Part #	Description	1.5T	2T	3T
1	124105G1	COIL EVAP DM 1.5T 12X29.31X3.5	1	1	1
	124105G2	COIL EVAP DM 2T 12X47X2.62	1	1	1
	124105G3	COIL EVAP DM 3T 12X47X3.5	1	1	1

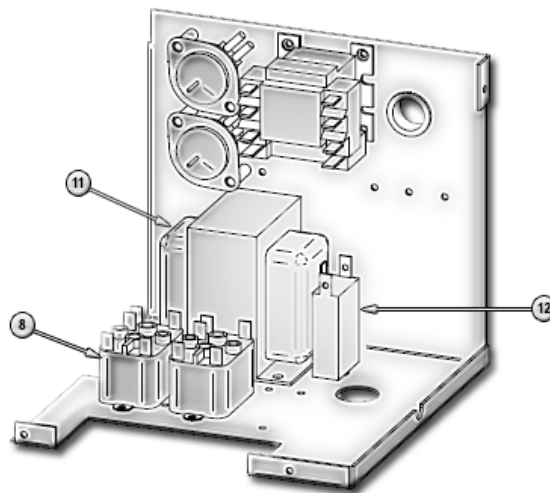
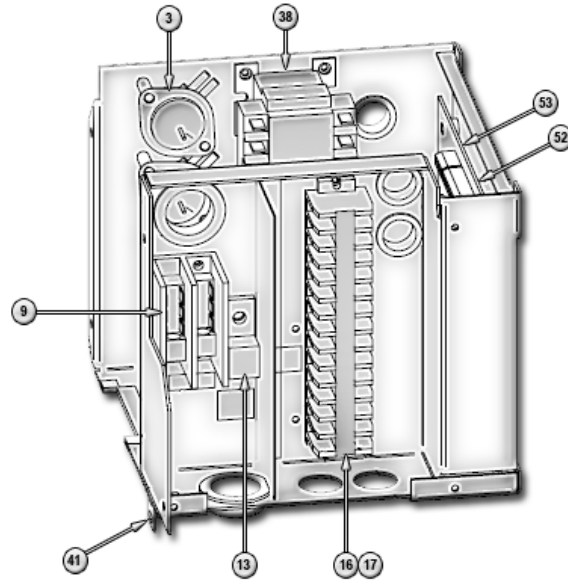
#### 3.2. CW



Item	Part #	Description	1.5T	2T	3T
1	130886G1	COIL CW 2T DME		1	
25	P02-0290	VALVE CORE REFRIGERANT		1	

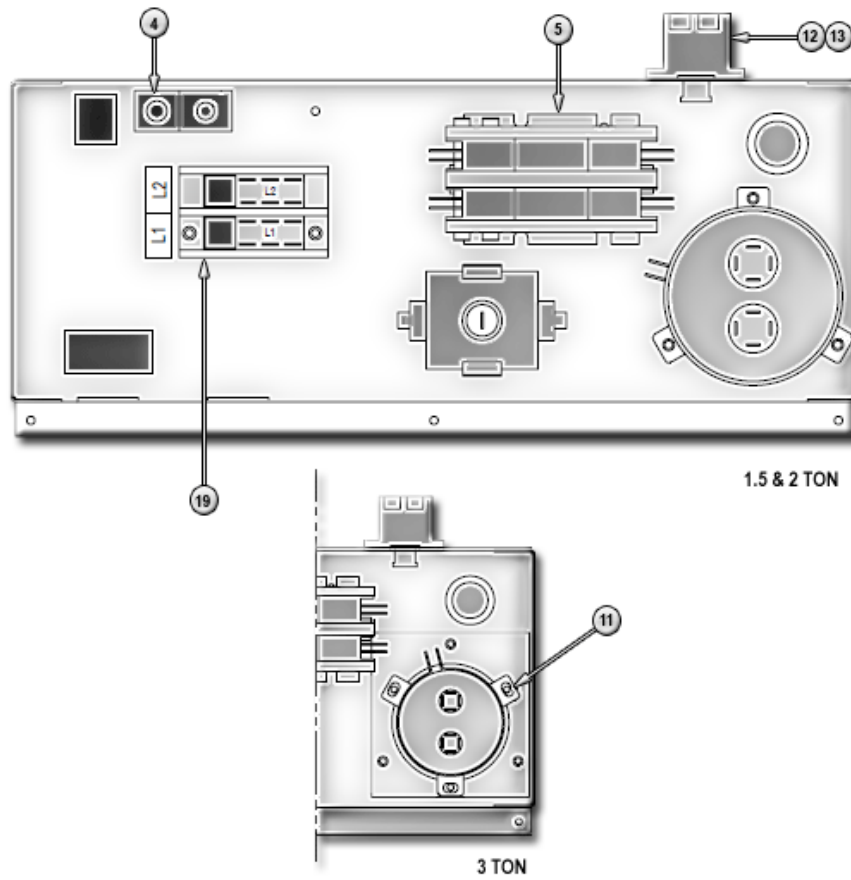
## 4. Electrical Section

### 4.1. Reheat and Humidifier



Item	Part #	Description	1.5T	2T	3T
3	1D16378P20	SAFETY STAT REHEAT DM	1	2	2
8	E03-0170	RELAY 1P2T 24V 50/60HZ	2	2	2
9	121187P1	PWRBLK 2PL 1)2:14X6)10:18 QC	1	1	1
11	E03-0010	XFMR 075VA 5060 208/30/77-24	1	1	1
12	E-276C	CB 3.2A BRKT MNT ETA	1	1	1
13	E-362B	TERM LUG MECH #14-2/O 1/4"	1	1	1
16	132487P2	TERMLSTRIP SECTION END BARRIER	2	2	2
17	132487P1	TERMLSTRIP SECTION 1 POS	19	19	19
38	131116P1	RELAY ELECTRIC HEAT	1	1	1
41	124133P1	BRKT CNTL BOX MTG DM	1	1	1
52	149749P1	STANDOFF .250" FOR .156" HOLE	2	2	2
53	415771G1	PWA CONTROL BOARD MM2	1	1	1

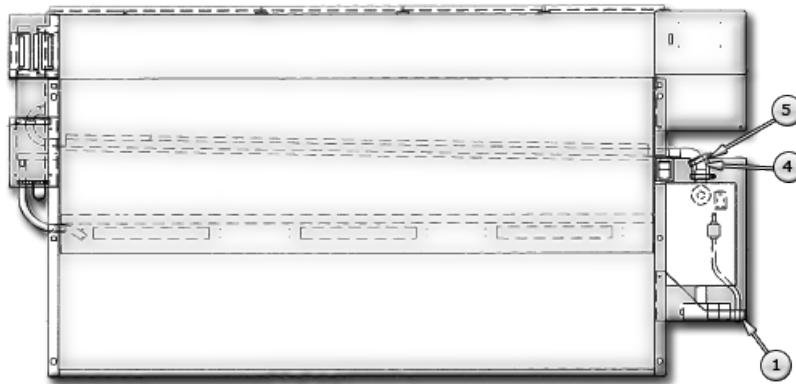
**4.2. DBMP**



Item	Part #	Description	1.5T	2T	3T
4	E-362B	TERM LUG MECH #14-2/0 1/4"	1	1	1
5	1C21105P1	CONTACTOR 2PL 24V	1	1	1
11	1A19542P1	BRKT CAP MTG 2.00" DIA	1	1	1
	E12-243A	BRKT CAP MTG 2.00" DIA	1	1	1
12	132487P1	TERMLSTRIP SECTION 1 POS	19	19	19
13	132487P2	TERMLSTRIP SECTION END BARRIER	2	2	2
19	121187P1	PWRBLK 2PL 1)2:14X6)10:18 QC	1	1	1

## 5. Humidifier Section

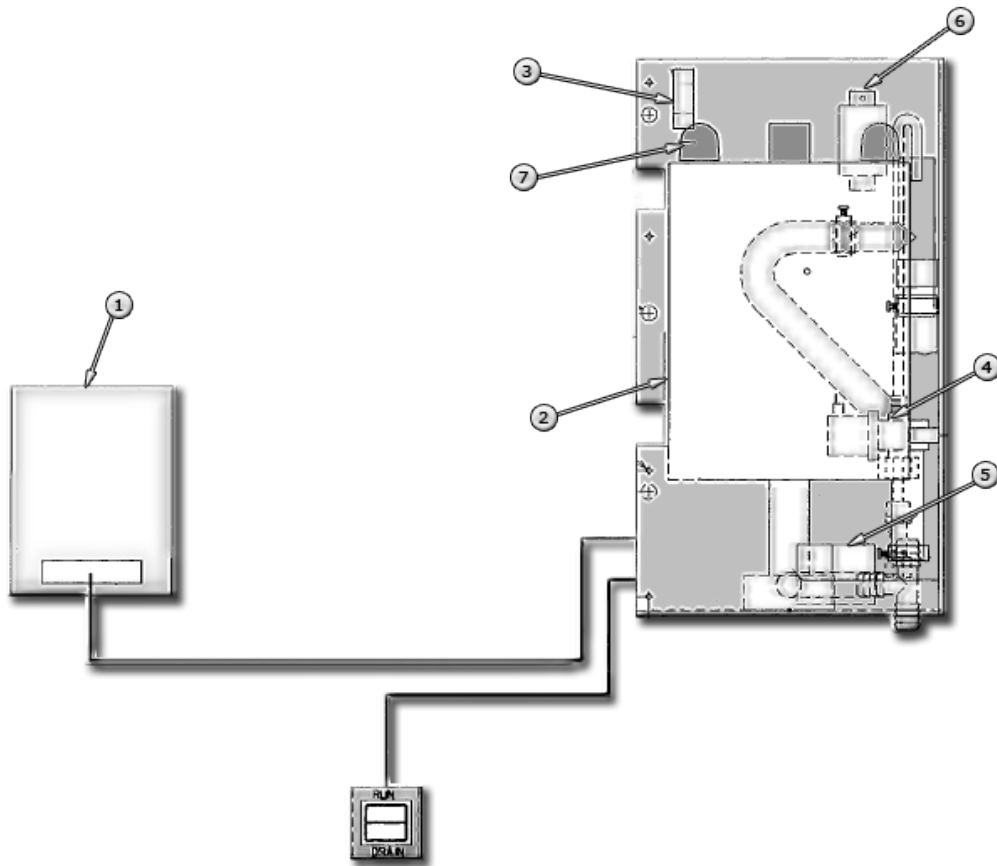
### 5.1. Main Assembly



Item	Part #	Description	Voltage	20E	27E	37E	44C
1		Humidifier Assembly on Page					
4	124220P1	Hose Steam 0.88ID 10PSI	208/230-60-1 200/230-50-1	1	1	1	1
5	124216P2	CLAMP HOSE WORM DRIVE.31 X 1.25	208/230-60-1 200/230-50-1	1	1	1	1

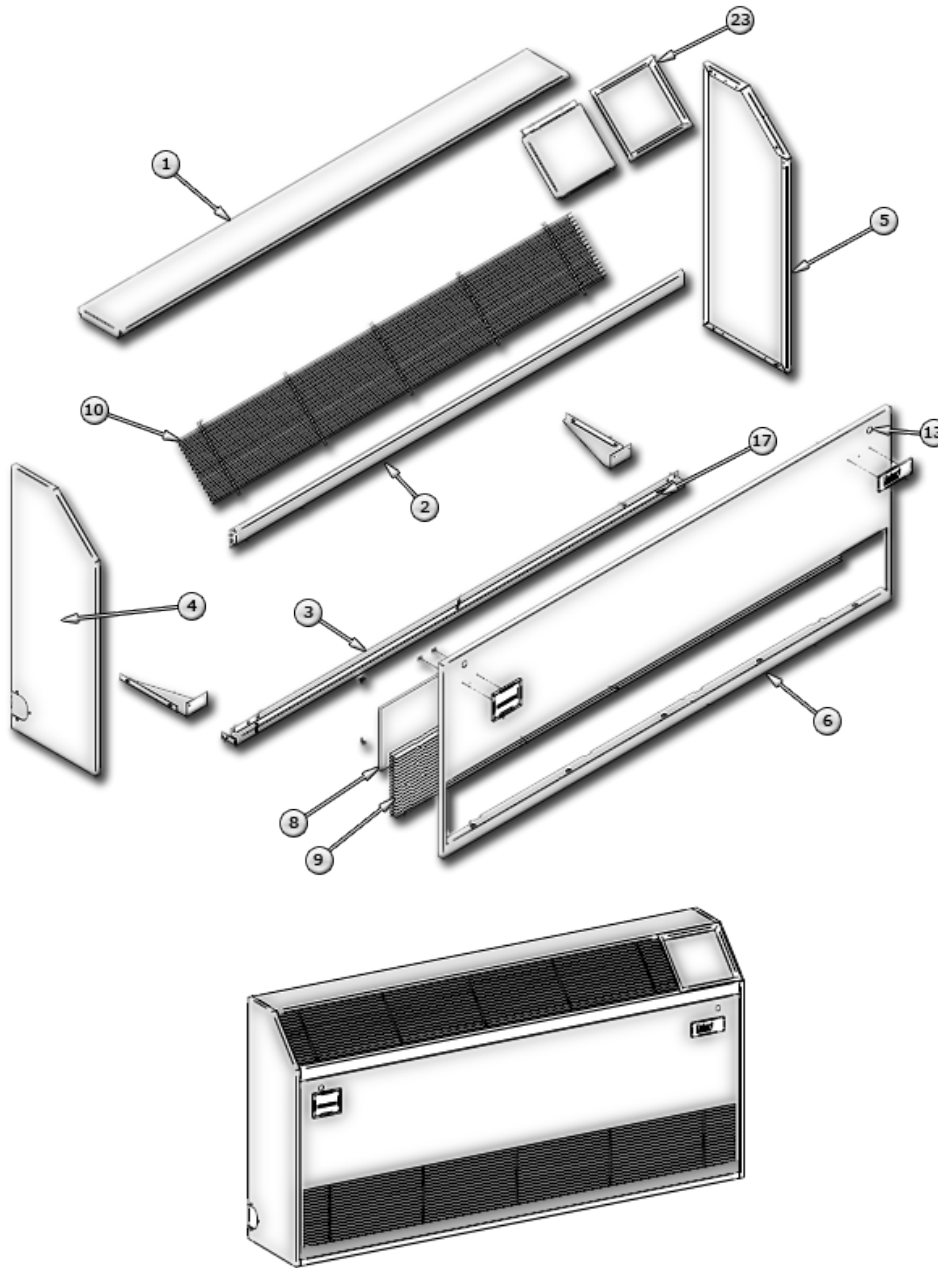


**5.2. Humidifier Assembly**



Item	Part #	Description	Voltage	20E	27E	37E	44C
1	134562P1	PWA CNTL ELEC RELAY HUM 2STG	208/30-60-1	1	1	1	1
2	127849P1	BOTTLE HUM 1PH 220/277 5 LBS	208/230-60-1 200/230-50-1	1	1	1	1
3	127853P1	XFMR TORROID HUM 5T MME	208/230-60-1 200/230-50-1	1	1	1	1
4	136812P1	VALVE SOL/STRNR HUM FILL 24V	208/30-60-1	1	1	1	1
5	127992P1	VALVE SOL DRAIN KIT HUM 24V	208/230-60-1 200/230-50-1	1	1	1	1
6	E03-0170	Relay 1P2T 24V 50/60HZ	208/230-60-1 200/230-50-1	1	1	1	1
7	128759P1	BOOT RUBBER SG HUM TERM COVER	208/230-60-1 200/230-50-1	2	2	2	2

## 6. Exterior Section

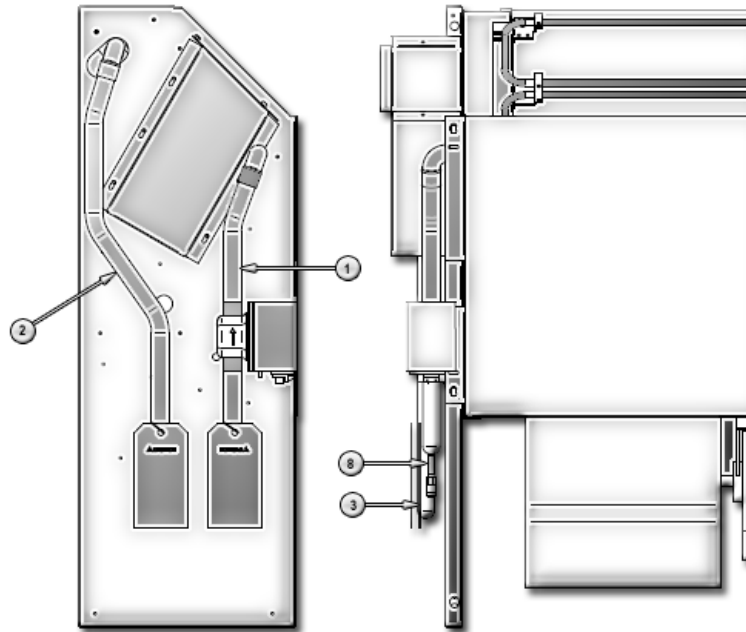


Item	Part #	Description	Voltage	20E	27E	37E	44C
1	131111P1	PANEL CAB TOP 16GA CRS 62.88	208/230-60-1 200/230-50-1		1	1	
	131111P2	PANEL CAB TOP 16GA CRS 45.25	208/230-60-1 200/230-50-1	1			
2	131110P1	PANEL CAB UP FR 16GA CRS 62.88	208/230-60-1 200/230-50-1		1	1	1
	131110P2	PANEL CAB UP FR 16GA CRS 45.25	208/230-60-1 200/230-50-1	1			
3	132483P1	PANEL CABINET LOWER FR 63" DM	208/230-60-1 200/230-50-1		1	1	1
	132483P2	PANEL CABINET LOWER FR 45" DM	208/230-60-1 200/230-50-1	1			
4	124079P1	PANEL CABINET LEFT SIDE DM	208/230-60-1 200/230-50-1	1	1	1	1
5	124079P2	PANEL CABINET RIGHT SIDE DM	208/230-60-1 200/230-50-1	1	1	1	1
6	124081P1	PANEL FRAME SERVICE 63" DM	208/230-60-1		1	1	1

Item	Part #	Description	Voltage	20E	27E	37E	44C
			200/230-50-1				
	124081P2	PANEL FRAME SERVICE 45 " DM	208/230-60-1 200/230-50-1	1			
8	183916P1	FILTER AIR ASSY BLACK 1.5T DME	208/230-60-1 200/230-50-1	1			
	183917P1	FILTER AIR ASSY BLACK 2&3T DME	208/230-60-1 200/230-50-1		1	1	1
9	131108G2	GRILL AIR RETURN ASSY DME 2/3T	208/230-60-1 200/230-50-1		1	1	1
	131108G4	GRILL AIR RETURN ASSY DME 1.5T	208/230-60-1 200/230-50-1	1			
10	131108G1	GRILL AIR DISCH ASSY DME 2/3T	208/230-60-1 200/230-50-1		1	1	1
	131108G3	GRILL AIR DISCH ASSY DME 1.5T	208/230-60-1 200/230-50-1	1			
13	1D16378P63	LOCK PANEL DMATE	208/230-60-1 200/230-50-1	2	2	2	2
17	124144P1	SUPPORT FRONT SERVICE PANEL DM	208/230-60-1 200/230-50-1	2	3	3	3
23	131109P1	BEZEL DM CONTROL	208/230-60-1 200/230-50-1	1	1	1	1

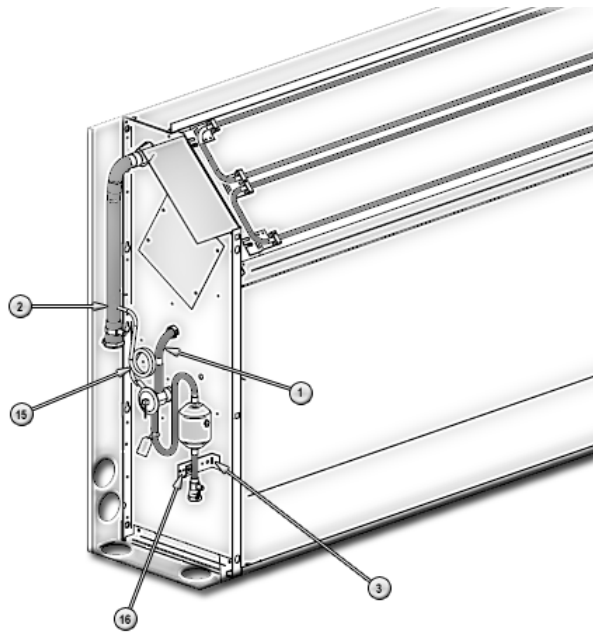
## 7. Piping Section

### 7.1. Chilled Water



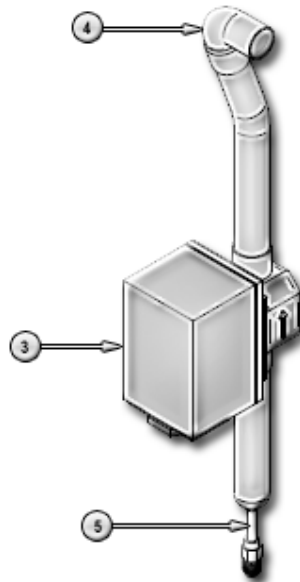
Item	Part #	Description	2T	3T
1		PIPG WATER IN DME CW 2/3T on Page 11		
2		PIPING WATER OUT DME CW 2/3T on Page 12		
3	S-0140	INSULATION TUBE 3/8"WALL 7/8"	4	4
8	P02-0290	VALVE CORE REFRIGERANT	1	1

**7.2. DX**



Item	Part #	Description	2T	3T
1		PIPING WATER OUT DME CW 2/3T on Page 12		
2	124164G2	SUCTION ASSY 1/2 1.5T DM R407C	1	1
3	F20-2300	BRKT COND PUMP ADJ-PART B	2	2
15	191314P1	TUBE STR CU1/4X.028X22.00 B/S	1	1
16	P-229C	CLAMP INSULATED METAL 3/8"	1	1

**7.3. Water In Assembly**



Item	Part #	Description	2T	3T
3	127585P2	VALVE H2O SLOW 2WAY 3/4" 8CV	1	1
4	P-0800	ELL 90 FTGXC 7/8" CU	1	1
5	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	1	1

### 7.4. Water Out Assembly



Item	Part #	Description	2T	3T
3	P-0800	ELL 90 FTGXC 7/8" CU	1	1
5	134648P1	TUBE FORM CU 7/8 WTR	1	1
	199793P1	TUBE FORM CU 7/8 WTR	1	1

## 8. Parts Gallery

### Electrical Section

			
1C21105P1	1D16378P20	121187P1	124133P1
			
131116P1	132487P1	132487P2	415771G1
			
E03-0010	E03-0170	E-276C	E-362B

### Humidifier Section

			
100281	124216P2	124220P1	127849P1
			
148250P2/3	127935P1	127935P5	167770P1
			
136812P1	E03-0170	P02-0020	

**Exterior Section**

1D16378P63	124079P1	124079P2	124080P1
124081P1	124143P1	124144P1	124145P1
131108G1/3	131108G2/4	131109P1	131110P1
131111P1	132483P1	167442P1	183916P1

**Piping Section**

124164G2	127585P2	180716P3	180806P1
187933G2	191314P1	F20-2300	P02-0290
P03-0030	P-229C		



## 9. Revision Page

Revision Date	Modification	Details
01/2011	Manual Release	