

# Liebert MM2 (2&3T): R407C

## Parts Manual



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Precision Cooling  
For Business-Critical Continuity

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## 1. Product Description

The **Mini-Mate2** is a split system air, water/glycol cooled unit, or self contained chilled water unit.

The **Evaporator Section** includes the evaporator coil, factory mounted disconnect switch, blower assembly, and microprocessor control with wall mounted control box. The unit is provided with supply and return air openings for field supplied ducting. Evaporator sections are available in 208/230 Volt 1-phase or 277 Volt 1-phase models. 3-ton Evaporators are also available in 208/230 Volt 3-phase, or 460 Volt 3-phase models. Evaporators can be configured with canister humidifier and/or reheat. A condensing unit must be selected for each evaporator.

The **Evaporator** can also be ordered as a belt-drive unit. In this configuration the blower and direct drive motor are removed from the evaporator, and replaced by the high static blower assembly. The high static blower assembly is ordered separately.

**Microprocessor Control** includes a 2 line, 16 character, wall-mounted LCD display which provides temperature set point and sensitivity adjustment, humidity set point and sensitivity adjustment, digital display of temperature, humidity, set points and sensitivities, and alarm conditions. An 8-key membrane keypad for setpoint/program control, unit on/off, fan speed, and alarm silence is located below the LCD display. The display can be located up to 300 ft (91.4 m) from the evaporator unit, using field supplied wire. Temperature and humidity sensors are located in the wallbox.

### Air Cooled Condensing Units

**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, and filter drier. Unit must be mounted indoors. Duct flanges are provided. (See pricing for voltages). Hot Gas Bypass is available as an option.

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

**MCD Water/Glycol Condensing Unit** includes a scroll compressor, factory mounted disconnect switch, coaxial condenser, two-way or optional three-way water regulating valve, and filter drier. Design pressure is 150 psi (1034 kPa) or optional 300 psi (2068 kPa). (See pricing for voltages and complete model number). Drycooler(s) and pump(s) selected separately for applications using glycol loop.

**Chilled Water Models** are self-contained and include chilled water coil, slow close two-way solenoid valve, and factory mounted disconnect switch. Design pressure is 300 psi (2068 kPa) static pressure, with 60 psi (414 kPa) close-off pressure rating.

### Optional Factory Installed Equipment

Evaporator Options

**Electric Reheat** includes 304/304 stainless steel finned tubular reheat, with high limit safety switch.

**SCR Electric Reheat** includes the controller and software to provide full cooling with modulating reheat.

**Hot Water Reheat** includes a hot water coil, 2-way solenoid valve, and Y-strainer.

Note: this option not available with free-cooling option or other reheat options.

**Humidifier Package** includes steam generating type humidifier with automatic flushing circuit, inlet strainer, drain, and solenoid valves. Humidifier Problem alarm is annunciated to wallbox.

**Free-Cooling** coil can be ordered with the evaporator section. This option contains a 3-way, slow-close solenoid valve, thermostat, flushing circuit, and separated supply and return piping for chilled water cooling. A 3-way regulating valve is recommended for the water/glycol condensing unit.

**Smoke Detector** is factory wired to provide an audible and visual alarm at the control display, and shuts the unit off.

**Firestat** senses return air temperature and shuts down unit if temperature reaches the 125°F (51.7°C).

**Filter Clog** senses pressure drop across the filters and annunciates the display upon reaching a customer set point.

### Condensing Unit Options

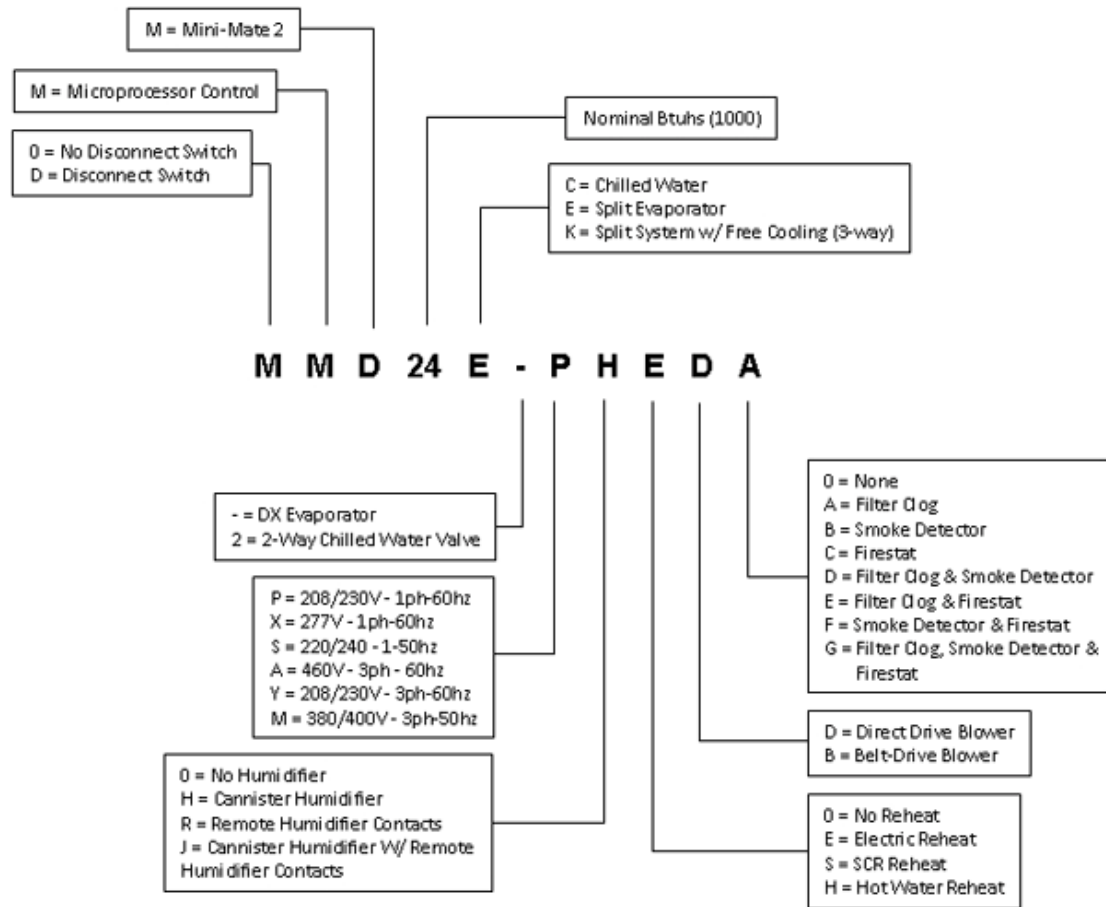
**Hot Gas Bypass** includes bypass valve, solenoid valve, and necessary piping for manual capacity modulation.

**High Ambient, Quietline, and Hot Gas Bypass** options are also available on Prop-Fan Condensing Units. Consult Prop-Fan Condensing Unit Pricebook for pricing.

### Ship Loose Accessories

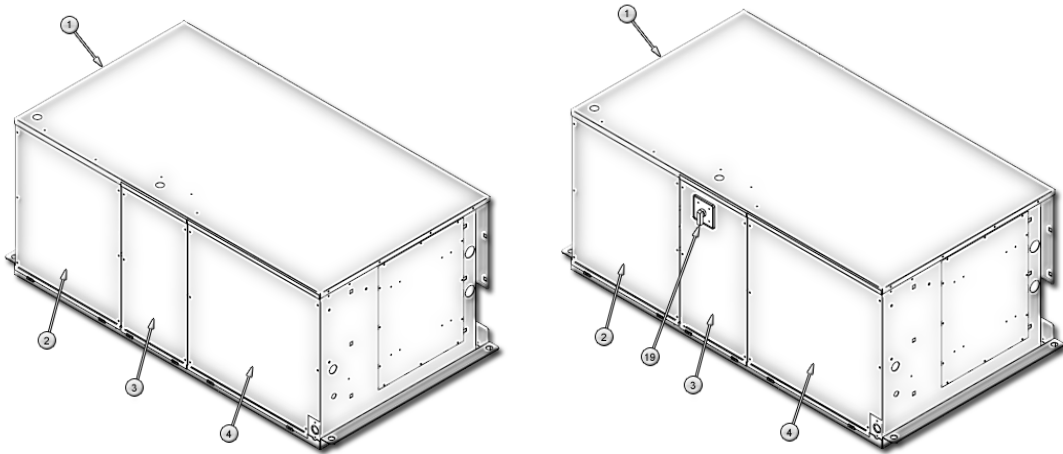
**Filter Box (for ducted applications)** includes filter box with duct flange connection, 20"x 20"x 4" (508mm x 508mm x 102mm) filter, and a duct flange for use on the supply air opening of the unit. Available with 20% or 30% filters.

## 2. Model Number Definition



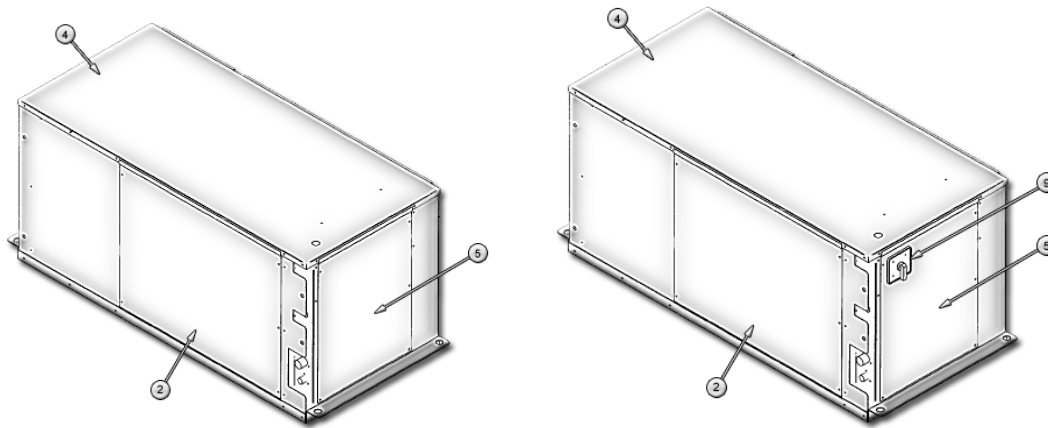
### 3. Access Panels

#### 3.1. Evaporator



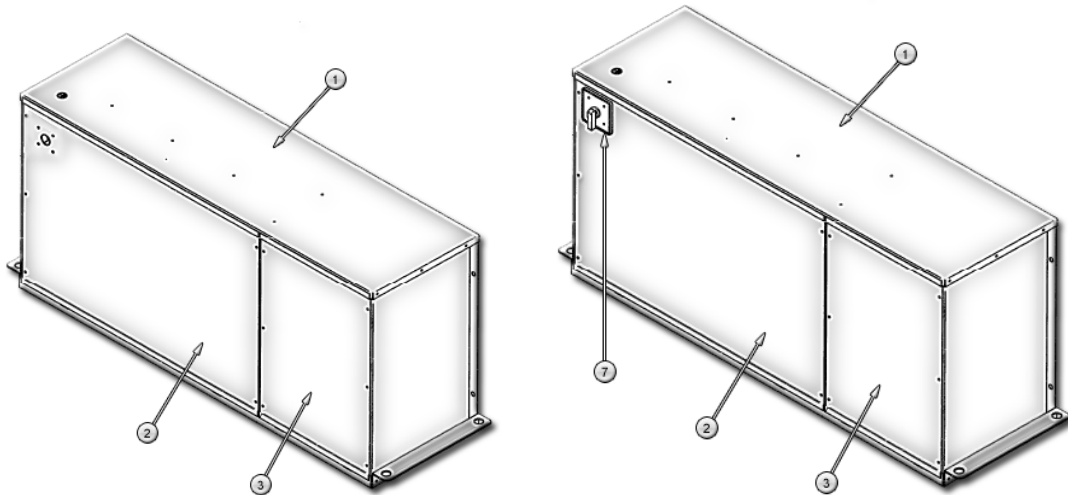
Item	Part Number	Description	Voltage	2T	3T
1	156171P1	PANEL TOP 2/3T MM2	208/230-1-60	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
2	156168P1	PANEL FRONT LEFT 2/3T MM2	208/230-1-60	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
3	156169P1	PANEL FRONT CENTER 2/3T MM2	208/230-1-60	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
4	156170P1	PANEL FRONT RIGHT 2/3T MM2	208/230-1-60	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
19	1C18352P1	HANDLE DISC SWT/FACEPLATE K/M	208/230-1-60	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1

### 3.2. Air Cooled



Item	Part Number	Description	Voltage	2T	3T	3.5T
2	156359P1	PANEL ACC RT 2/3T A COND MM2	208/230-1-60	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3	1	1	1
			460/60/3		1	1
4	156356P1	PANEL TOP 2/3T A COND MM2	208/230-1-60	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3	1	1	1
			460/60/3		1	1
5	156366P2	PANEL ACC LFT 2/3T A COND MM2	208/230-1-60	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3	1	1	1
			460/60/3		1	1
9	1C18352P1	HANDLE DISC SWT/FACEPLATE K/M	208/230-1-60	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3		1	1
			460/60/3		1	1

### 3.3. Water Cooled

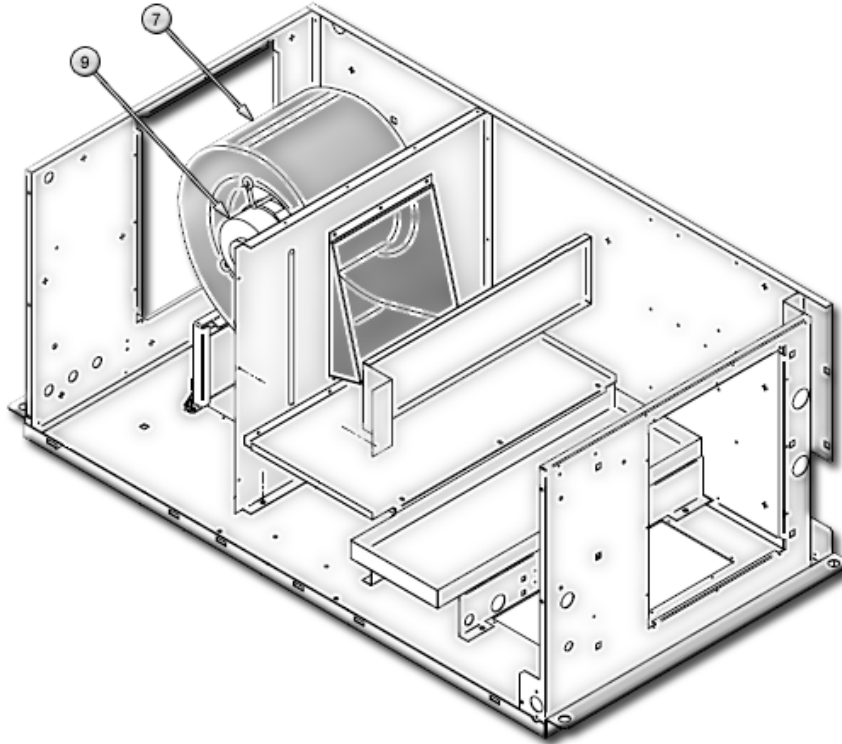


Item	Part Number	Description	Voltage	2T	3T	3.5T
1	156554P1	PANEL TOP REAR WG COND 2/3TMM2	208/230-1-60	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3		1	1
			460/60/3		1	1
2	156556P2	PANEL LFT FRT WG COND NO DISC	208/230-1-60	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3		1	1
			460/60/3		1	1
3	156557P1	PANEL RIGHT FRT WG COND 2/3T	208/230-1-60	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3		1	1
			460/60/3		1	1
7	1C18352P1	HANDLE DISC SWT/FACEPLATE K/M	208/230-1-60	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3		1	1
			460/60/3		1	1



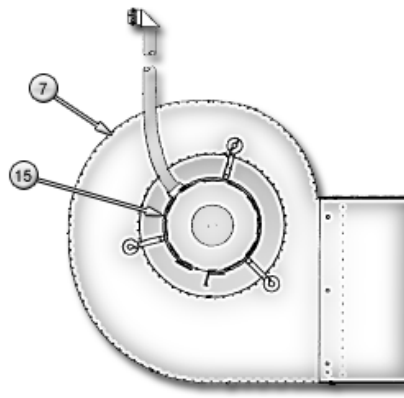
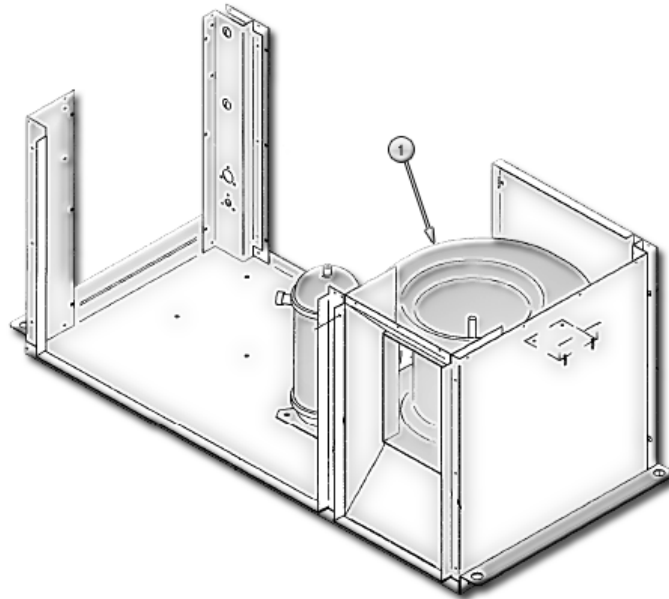
## 4. Blower/Motor Section

### 4.1. Evaporator



Item	Part Number	Description	Voltage	Quantity
7	1C19516P1	BLOWER W/H DD10-08APX0.50	208/230-1-60	1
			208/230/60/3	1
			220/240/50/1	1
			277/60/1	1
			380/400/50/3	1
			460/60/3	1
9	1C19516P1	MOTOR .50HP 205//236-1-50/60	208/230-1-60	1
	1D19535P2	MOTOR .50HP 277-1-60	277-1-60	1
	1D19535P3	MOTOR .50HP 460-1-60	460-3-60	1
	1D19535P4	MOTOR .50HP 220//240-1-50	220/240-1-50	1
	1D19535P5	MOTOR .50HP 380-415/380 50/60	380/415-3-50	1

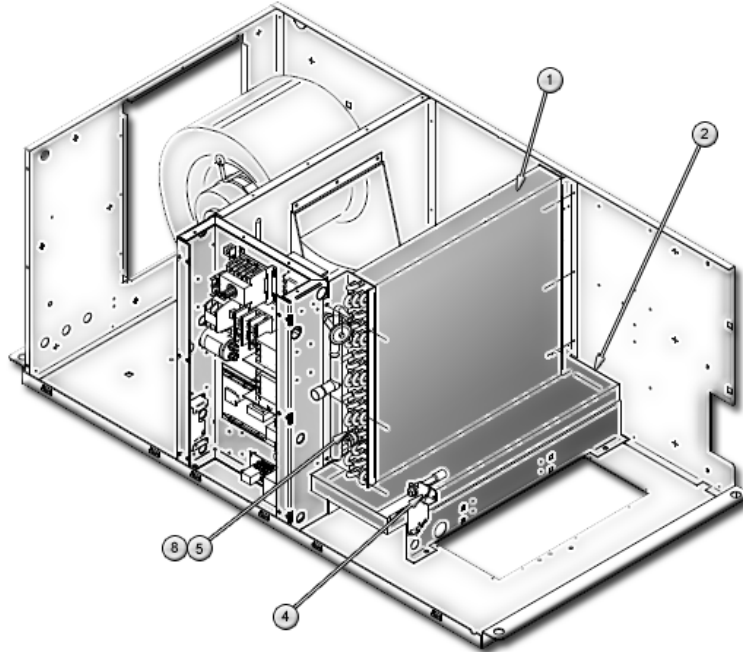
## 4.2. Air Cooled Condenser



Item	Part Number	Description	Voltage	2T	3T	3.5T
7	127651P1	BLOWER W/H DD11-09ATX0.50 W/RG	208/230-3-60 MMC			1
			380/415-3-50		1	1
			460-3-60			1
			220/240-1-50		1	
	1C19515P1	BLOWER W/H DD09-09AVPX0.50	208/230-1-60	1		
			277-1-60	1		
	1C19516P1	BLOWER W/H DD10-08APX0.50	220/240-1-50	1		
			208/230-1-60		1	
			277-1-60		1	
380/400-3-50			1			
460-3-60				1		
15	128198P1	MOTOR 1.0HP 208/230-1-60	208/230-3-60			1
	128198P2	MOTOR 1.0HP 460-1-60	460-3-60			1
	128198P4	MOTOR 1.0HP 380/415-1-50	380/415-3-50			1
	1D19533P1	MOTOR .33HP 205//236-1-50/60	208/230-1-60	1		
			220/240-1-50	1		
	1D19534P1	MOTOR .50HP 205//236-1-50/60	208/230-1-60		1	
			220/240-1-50		1	
	1D19535P2	MOTOR .50HP 277-1-60	277-1-60	1	1	
	1D19535P3	MOTOR .50HP 460-1-60	460-3-60		1	
	1D19535P5	MOTOR .50HP 380-415/380 50/60	380/400-3-50	1		
415-3-50				1		

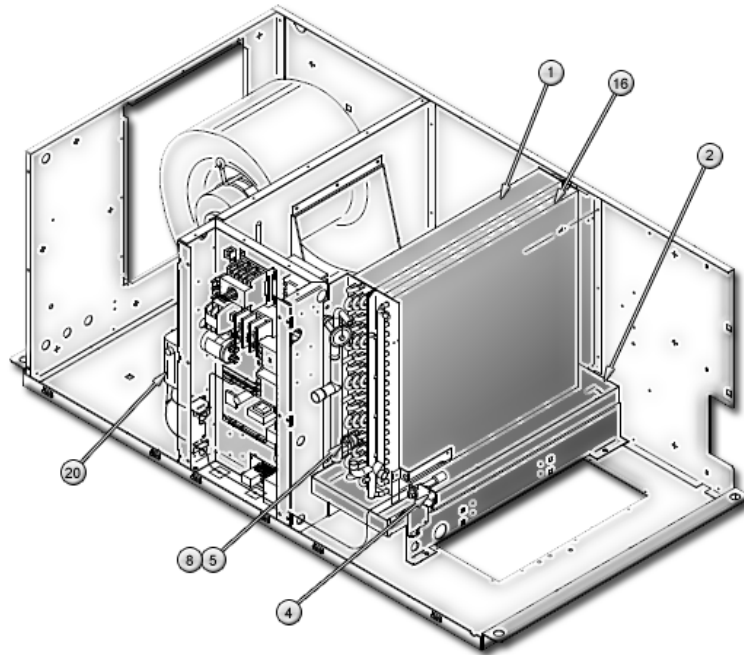
## 5. Coil Section

### 5.1. Evaporator



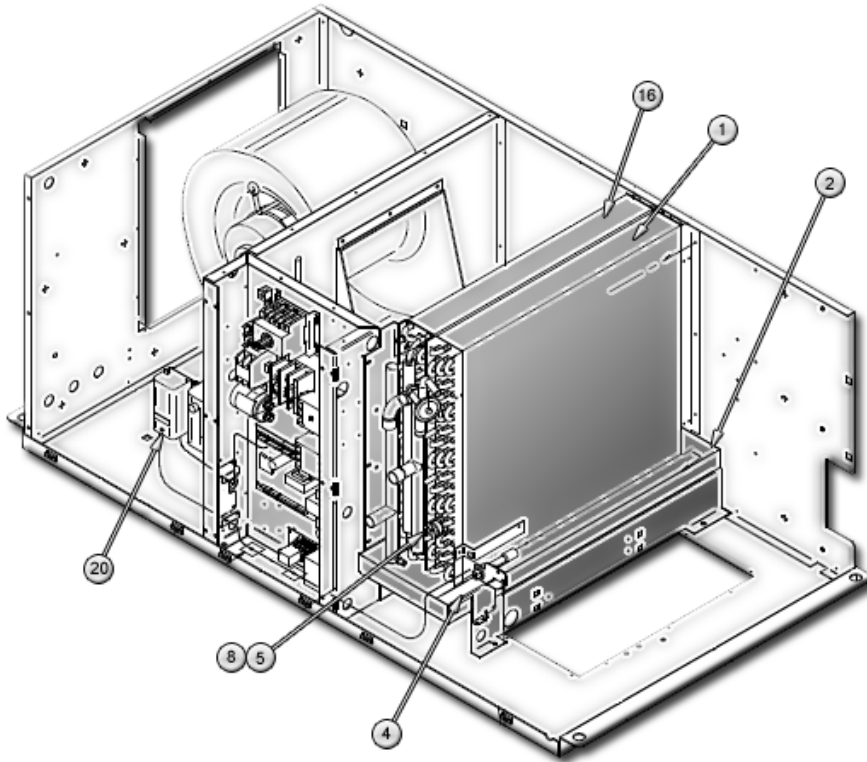
Item	Part Number	Description	Voltage	2T	3T
1	156103P1	COIL EVAP 3ROW MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
2	156153G1	PAN DRAIN ASSY 2/3T MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
4	1A18660P1	SW LEVEL LIQUID GEMS LS-7	460/60/3		1
			208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
5	1A19716P1	FREEZSTAT W/BRKT OPN31FCLS48F	380/400/50/3	1	1
			460/60/3		1
			208/230-3-60	1	1
			220/240/50/1	1	1
8	135690P1	TERMCSL.156 24-18G 100DNINS	277/60/1	1	1
			380/400/50/3	2	2
			460/60/3		2
			208/230-3-60	2	2
			220/240/50/1	2	2

## 5.2. Evaporator with Hot Water Reheat



Item	Part Number	Description	Voltage	2T	3T
1	156103P1	COIL EVAP 3ROW MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
2	156153G1	PAN DRAIN ASSY 2/3T MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
4	1A18660P1	SW LEVEL LIQUID GEMS LS-7	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
5	1A19716P1	FREEZSTAT W/BRKT OPN31FCLS48F	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
8	135690P1	TERMCSL.156 24-18G 100DNINS	208/230-3-60	2	2
			220/240/50/1	2	2
			277/60/1	2	2
			380/400/50/3	2	2
			460/60/3		2
16	156141P1	COIL HWRH 2/3T MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
20	168166P1	THSTAT SPST 30/50F 2.5FIXDIFF	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1

### 5.3. Evaporator with Freecooling

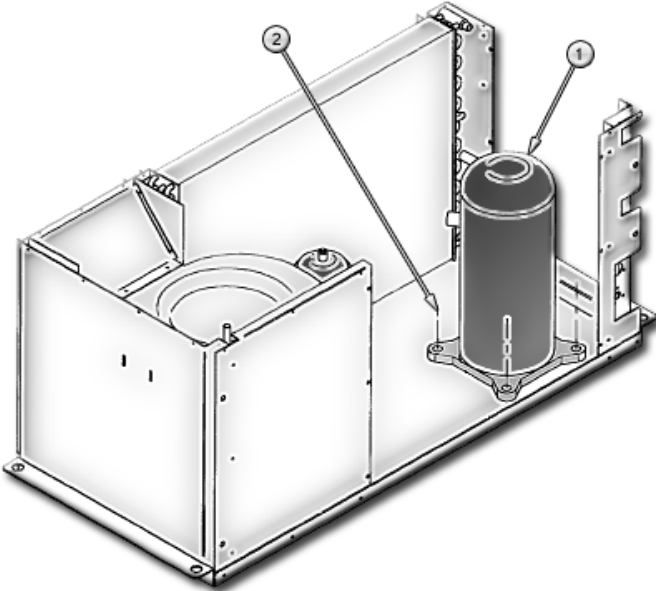


Item	Part Number	Description	Voltage	2T	3T
1	156103P1	COIL EVAP 3ROW MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3	1	1
	198246G1	COIL EVAP 3ROW 2/3T MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
2	156153G1	PAN DRAIN ASSY 2/3T MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
4	1A18660P1	SW LEVEL LIQUID GEMS LS-7	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
5	1A19716P1	FREEZSTAT W/BRKT OPN31FCLS48F	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
8	135690P1	TERMCSL.156 24-18G 100DNINS	208/230-3-60	2	2
			220/240/50/1	2	2
			277/60/1	2	2
			380/400/50/3	2	2
			460/60/3		2

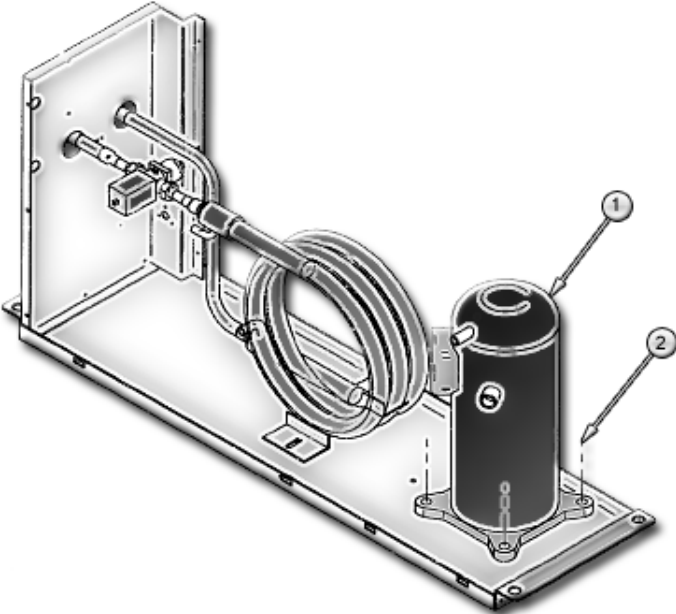
Item	Part Number	Description	Voltage	2T	3T
16	156140P1	COIL CW STD/FREECOOL 2/3T MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
	198250G1	COIL CW STD/FREECOOL 2/3T MM2	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
20	168166P1	THSTAT SPST 30/50F 2.5FIXDIFF	208/230-3-60	1	1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1

## 6. Compressor Section

### 6.1. Air Cooled Condenser



### 6.2. Water/Glycol Condenser

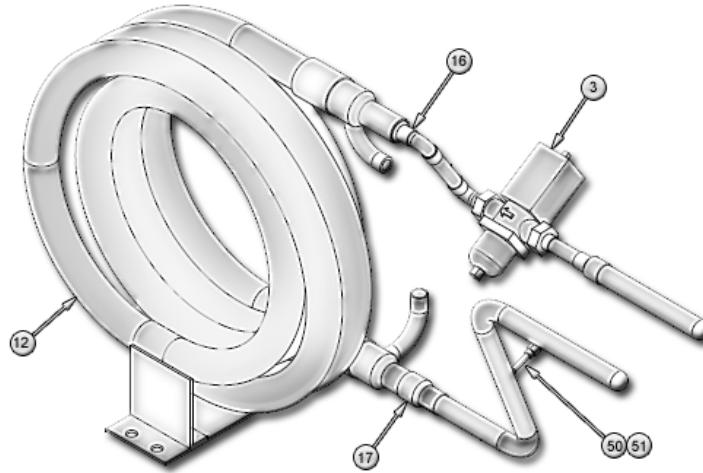


Item	Part Number	Description	Voltage	2T	3T	3.5T	
1	138430P1	COMP SCRL ZR40K3-TF5 W/O ROTA	208/230/60/3			1	
	138430P2	COMP SCRL ZR40K3-TFD W/O ROTA	380/400/50/3		1	1	
			460/60/3		1	1	
	138493P2	COMP SCRL ZR26K3-PFJ W/O ROTO	220/240/50/1	1			
	148221P2	COMP SCRL ZR34K3-PFJ W/O ROTO	277/60/1		1		
	148228P2	COMP SCRL ZR48KC-TFD W/O ROTA	380/400/50/3			1	
	148324P2	COMP SCRL ZR26K3-TFD W/O ROTO	380/400/50/3	1			
	148325P1	COMP SCRL ZR34K3-TF5 W/O ROTO	208/230/60/3		1		
	148325P2	COMP SCRL ZR34K3-TFD W/O ROTO	460/60/3		1		
	148326P2	COMP SCRL ZR40K3-PFJ W/O ROTO	220/240/50/1		1		
	156204P1	COMP SCRL ZR22K4-PFJ-230	277/60/1	1			
	159145P1	COMP SCRL ZR22K*-PFV W/O ROTO	208/230/60/1	1			
	159149P1	COMP SCRL ZR34K*-PFV W/O ROTO	208/230/60/1		1		
	166317P1	COMP SCRL ZR22K4E-PFV W/O ROTO	208/230/60/1	1			
	168919P1	COMP SCRL ZR40K3E-TF5 R407C	208/230/60/3				1
			380/400/50/3				1
168919P2	COMP SCRL ZR40K3E-TFD W/O ROTA	460/60/3				1	
		208/230/60/3				1	
169388P1	COMP SCRL ZR34K3E-TF5 W/O ROTO	208/230/60/3		1			
1	169388P2	COMP SCRL ZR34K3E-TFD W/O ROTO	460/60/3		1		
	169697P1	COMP SCRL ZR34K3E-PFV W/O ROTO	208/230/60/1		1		
	180048P2	COMP SCRL ZR26K3E-TFD W/O ROTO	380/400/50/3	1			
	181470P1	COMP SCRL ZR22K4E-PFJ-230	277/60/1	2			
	182081P2	COMP SCRL ZR40K3E-PFJ W/O ROTO	220/240/50/1		1		
	182805P2	COMP SCRL ZR26K3E-PFJ W/O ROTO	220/240/50/1	1			
	190105P2	COMP SCRL ZR48KCE-TFD W/O ROTA	380/400/50/3			1	
	191106P1	COMP SCRL ZR34K3E-PFJ W/O ROTO	277/60/1		1		
2	1A17649P1	KIT COMP MTG SPRING	208/230-3-60	1	1		
			220/240/50/1		1	1	
			277/60/1	1	1		
			380/400/50/3	1	1	1	
			460/60/3		1	1	



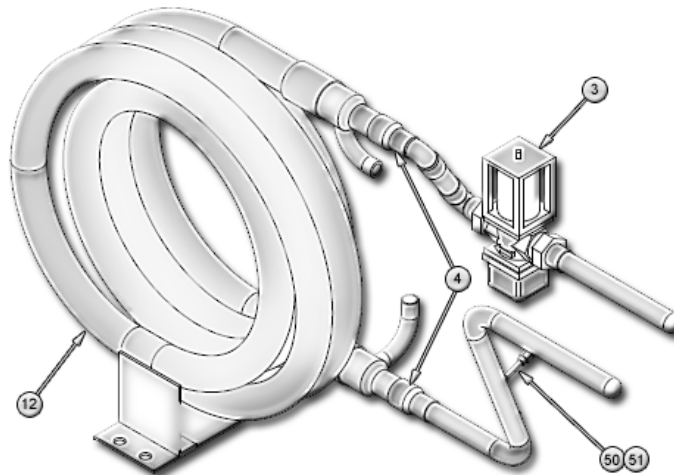
## 7. Condenser Section

### 7.1. 2-Way, Standard Pressure 3T



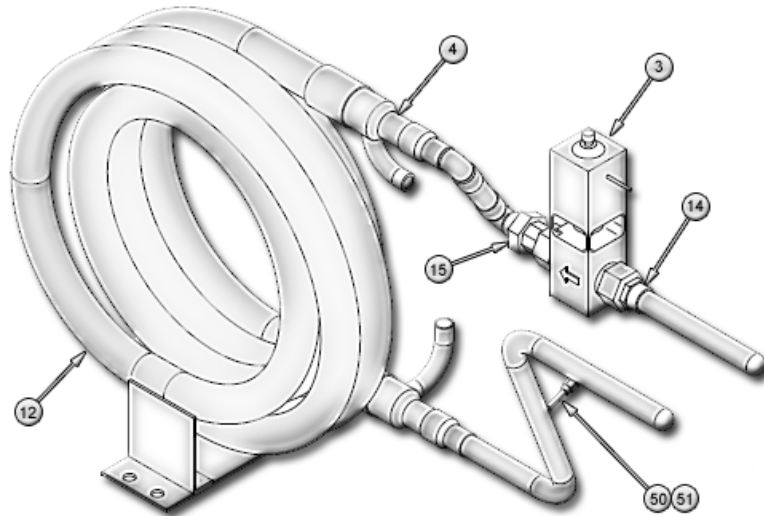
Item	Part Number	Description	Quantity
3	156400P1	VALVE H2O REG 2WAY 1/2" UB	1
12	128159P1	CONDENSER COAXIAL	1
16	P-1100	REDUCER CU CXC 7/8"X5/8"	2
17	P-1080	REDUCER CU CXC 1-1/8"X7/8"	1
50	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	1
51	P02-0290	VALVE CORE REFRIGERANT	1

### 7.2. 2-Way, Standard Pressure 3.5T



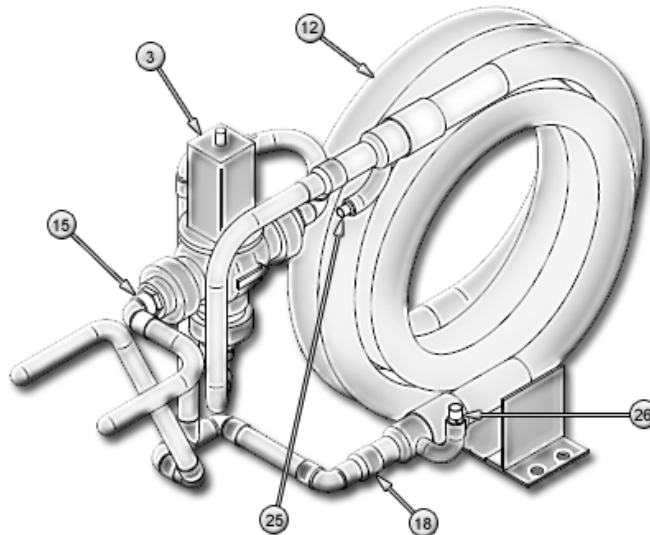
Item	Part Number	Description	Quantity
3	136696P1	VALVE H2O REG 2WAY 3/4" UB	1
4	P-1080	REDUCER CU CXC 1-1/8"X7/8"	1
12	128159P1	CONDENSER COAXIAL	1
50	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	1
51	P02-0290	VALVE CORE REFRIGERANT	1

### 7.3. 2-Way, High Pressure 3/3.5T



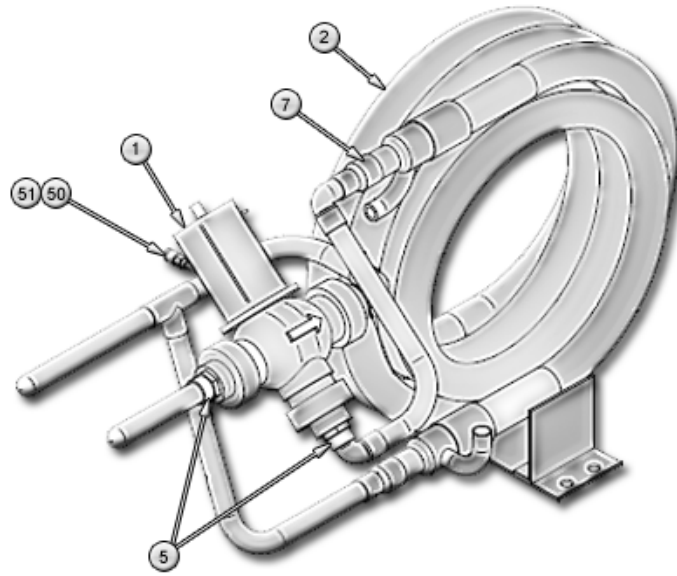
Item	Part Number	Description	Quantity
3	P-026A	VALVE H2O REG 2WAY 3/4" 350#	1
4	P-1080	REDUCER CU CXC 1-1/8"X7/8"	1
12	128159P1	CONDENSER COAXIAL	1
14	P-1210	ADAPTER CU CXM 7/8"X3/4"	1
15	P-2390	UNION CU CXM 7/8"X3/4"	1
50	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	1
51	P02-0290	VALVE CORE REFRIGERANT	1

### 7.4. 3-Way, High Pressure GL 3T



Item	Part Number	Description	Quantity
3	P-4760	VALVE H2O REG 3WAY 3/4" 300#	1
12	128159P1	CONDENSER COAXIAL	1
15	P-1210	ADAPTER CU CXM 7/8"X3/4"	1
18	P-1080	REDUCER CU CXC 1-1/8"X7/8"	1
25	P04-0110	REDUCER CU CXC 1/2"X3/8"	1
26	P-2980	REDUCER CU CXC 5/8"X1/2"	1

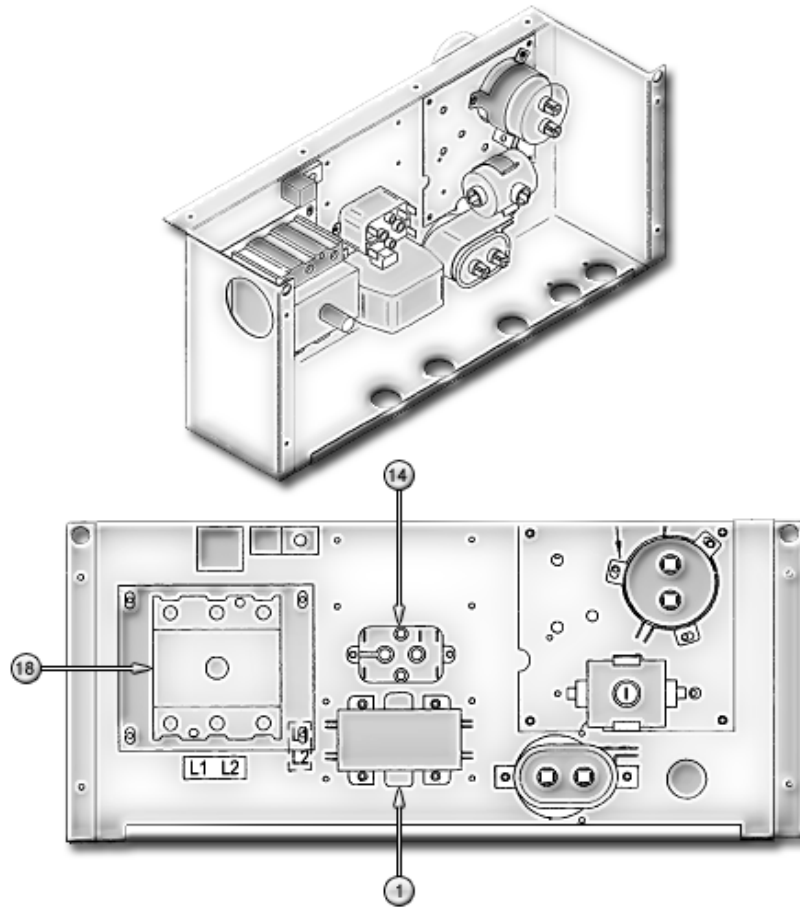
### 7.5. 3-Way, High Pressure 3T



Item	Part Number	Description	Quantity
1	P-4760	VALVE H2O REG 3WAY 3/4" 300#	1
2	128159P1	CONDENSER COAXIAL	1
5	P-1210	ADAPTER CU CXM 7/8"X3/4"	1
7	P-1080	REDUCER CU CXC 1-1/8"X7/8"	1
50	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	1
51	P02-0290	VALVE CORE REFRIGERANT	1

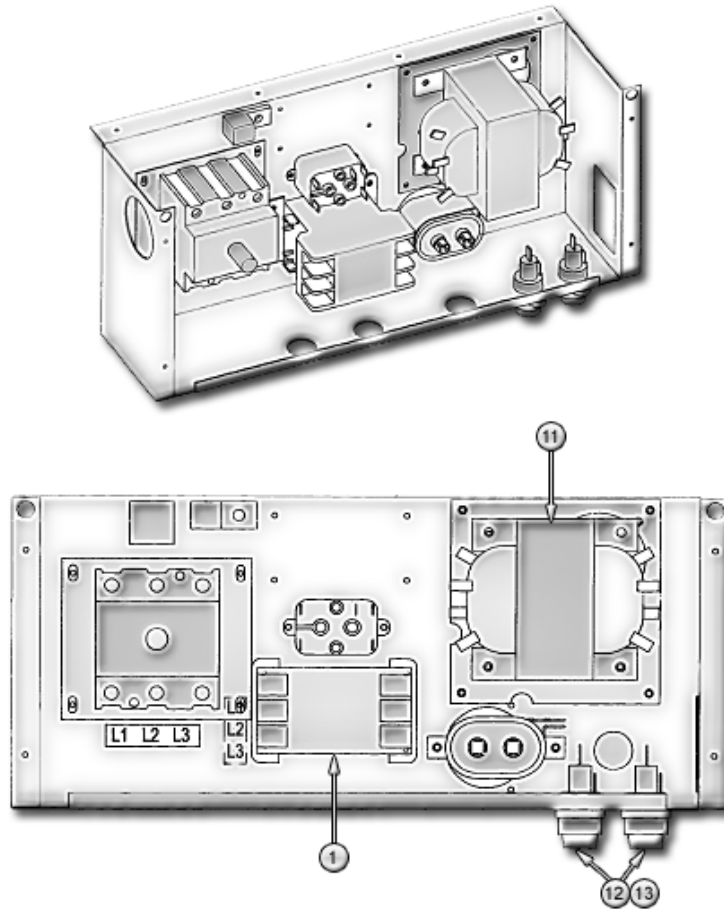
## 8. Electrical Section

### 8.1. Air Cooled 1-Phase



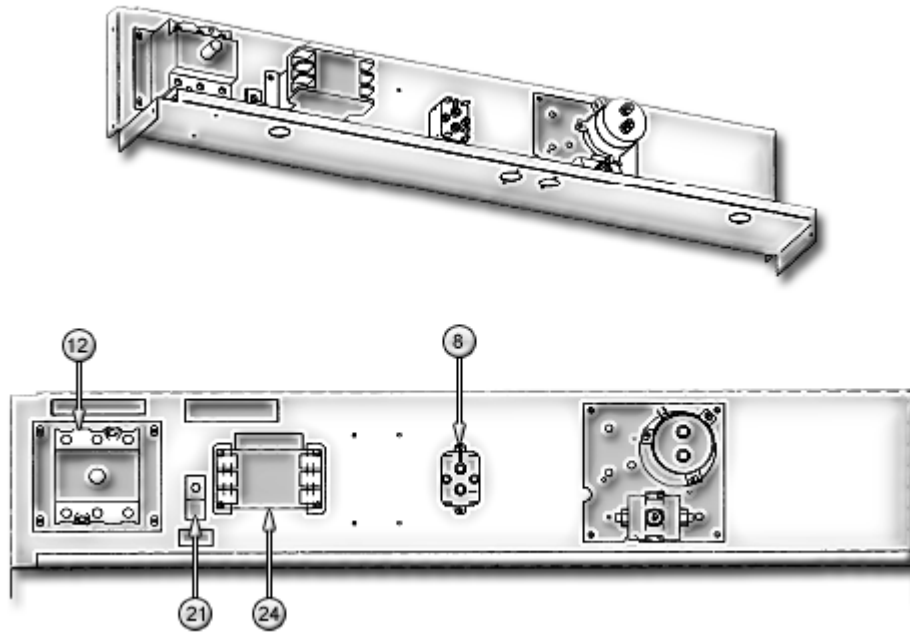
Item	Part Number	Description	Voltage	2T	3T	3.5T
1	E-0110	CONTACTOR 3PL 24VCOIL 25/30AMP	208/230/60/3		1	1
			380/400/50/3	1	1	1
			460/60/3		1	1
1	E-011B	CONTACTOR 2PL 24VCOIL 25/35AMP	208/230/60/1	1	1	
			220/240/50/1	1	1	
			277/60/1	1	1	
14	127661P1	RELAY SPDT 24V 50/60HZ	380/400/50/3	1	1	1
			460/60/3		1	1
			208/230/60/1	1	1	
14	E03-0170	RELAY 1P2T 24V 50/60HZ	208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
18	1C18351P2	SW DISC 600V 3PL 60A	208/230/60/1	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3	1	1	1
			460/60/3		1	1

### 8.2. Air Cooled 3-Phase



Item	Part Number	Description	Voltage	2T	3T	3.5T
1	E-0110	CONTACTOR 3PL 24VCOIL 25/30AMP	208/230/60/3		1	1
			380/400/50/3	1	1	1
			460/60/3		1	1
1	E-011B	CONTACTOR 2PL 24VCOIL 25/35AMP	208/230/60/1	1	1	
			220/240/50/1	1	1	
			277/60/1	1	1	
11	127937P1	XFMR 150VA 460/230	460/60/3		1	1
			127937P3	XFMR150VA380/440/600-230 50/60	380/400/50/3	1
12	4A10033P1	FUSE HLDR PNL-MNT SCRWCAP REJN	380/400/50/3	2	2	2
			460/60/3		2	2
13	127977P1	FUSE FNQ-R-3/4	380/400/50/3	2	2	2
			460/60/3		2	2

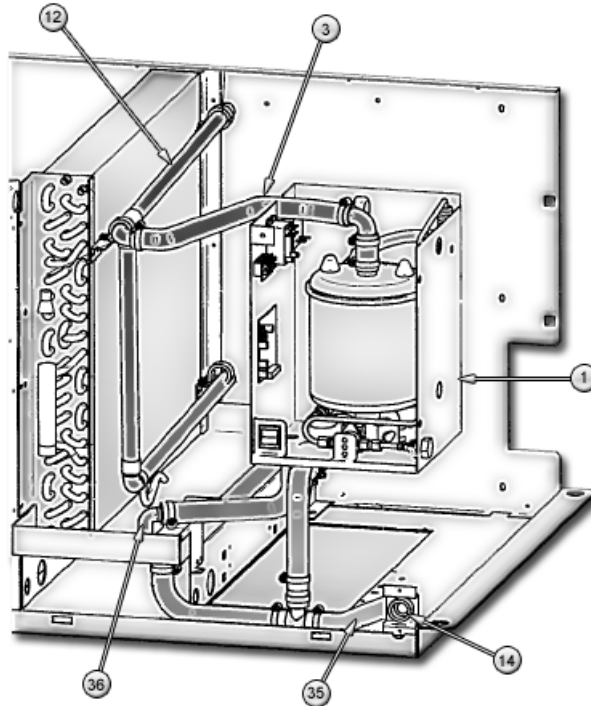
### 8.3. Water/Glycol



Item	Part Number	Description	Voltage	2T	3T	3.5T
8	127661P1	RELAY SPDT 24V 50/60HZ	380/400/50/3	1	1	1
			460/60/3		1	1
	E03-0170	RELAY 1P2T 24V 50/60HZ	208/230/60/1	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
12	1C18351P2	SW DISC 600V 3PL 60A	208/230/60/1	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3	1	1	1
			460/60/3		1	1
21	E-362B	TERM LUG MECH #14-2/0 1/4"	208/230/60/1	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3	1	1	
			460/60/3		1	1
24	123273P1	CONTACTOR 3PL 25/30 NO/NC AUX	208/230/60/1	1	1	
			208/230/60/3		1	1
			220/240/50/1	1	1	
			277/60/1	1	1	
			380/400/50/3	1	1	
			460/60/3		1	1

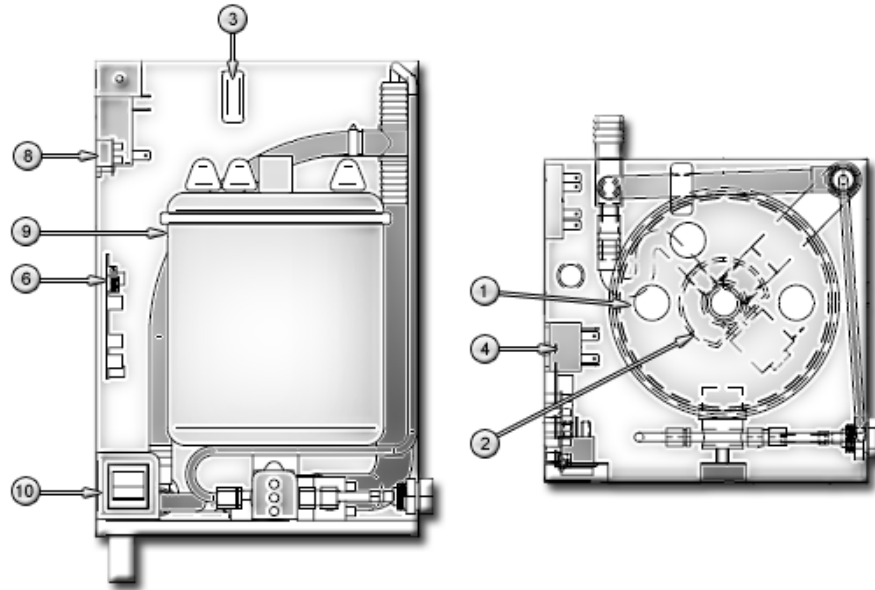
## 9. Humidifier Section

### 9.1. Humidifier SGH



Item	Part Number	Description	Voltage	2T	3T
1	-	Humidifier Assembly	-	-	-
3	164278G1	STEAM HOSE ASSY 2/3T MM2	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
12	156060G1	MANIFOLD STEAM ASSY 2/3T MM2	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
14	P02-0260	ADAPTER POLY 3/4FPTX3/4HOSE	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
35	164279G1	DRAIN HOSE ASSY 2/3T MM2	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
36	164369G1	DRAIN HOSE ASSY BTM 2/3T MM2	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1

**9.1.1. Humidifier Assembly**

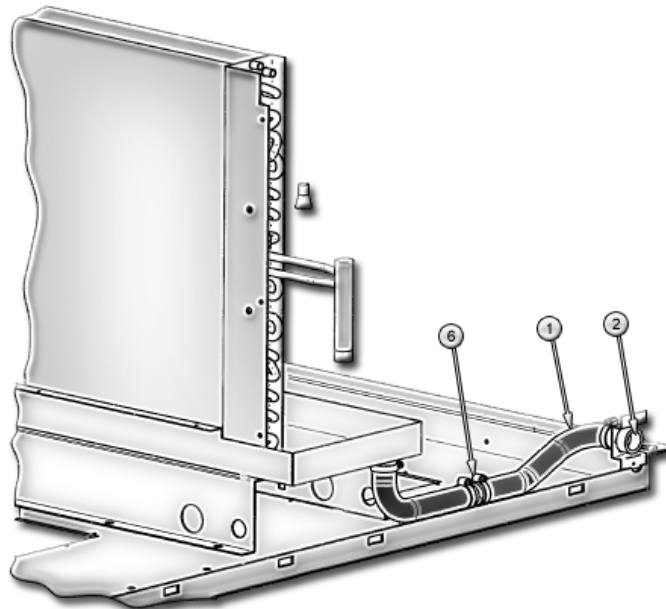


Item	Part Number	Description	Voltage	2T	3T
1	128759P1	BOOT RUBBER SG HUM TERM COVER	208/230/60/1	3	3
			208/230/60/3		3
			220/240/50/1	3	3
			277/60/1	3	3
			380/400/50/3	3	3
			460/60/3		3
2	127992P1	VALVE SOL DRAIN KIT HUM 24V	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
3	127853P1	XFMR TORROID HUM 5T MME	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
4	154240P1	RELAY 2P2T 24V 50/60HZ	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
6	154243P1	PCB SGH MM2	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
8	136972P1	TERMBLK SGHC3000	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1



Item	Part Number	Description	Voltage	2T	3T
9	154016P1	TANK HUMIDIFIER 200/277 5#	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
9	154016P2	TANK HUMIDIFIER 460 MM2 2/3T	380/400/50/3	1	1
			460/60/3		1
10	1A19592P1	SW 2P2T ROCKER	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1

### 9.2. Humidifier without Drain



Item	Part Number	Description	Voltage	2T	3T
1	1C11305P1	HOSE DRAIN .75 ID FORMED	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
2	P02-0260	ADAPTER POLY 3/4FPTX3/4HOSE	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1
6	P15-0140	UNION NYLON 3/4BARBX3/4BARB	208/230/60/1	1	1
			208/230/60/3		1
			220/240/50/1	1	1
			277/60/1	1	1
			380/400/50/3	1	1
			460/60/3		1

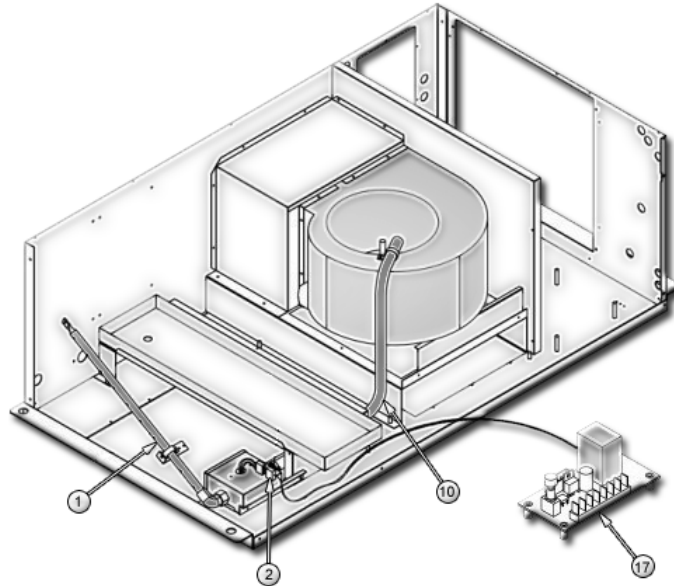
### 9.3. Humidifier Contact



Part Number	Description	Voltage	2T	3T
132487P1	TERMLSTRIP SECTION 1 POS	208/230/60/1	2	2
		208/230/60/3		2
		220/240/50/1	2	2
		277/60/1	2	2
		380/400/50/3	2	2
		460/60/3		2
E-0380	TERMBLK SECTION 1POS	208/230/60/1	2	2
		208/230/60/3		2
		220/240/50/1	2	2
		277/60/1	2	2
		380/400/50/3	2	2
		460/60/3		2
132487P2	TERMLSTRIP SECTION END BARRIER	208/230/60/1	1	1
		208/230/60/3		1
		220/240/50/1	1	1
		277/60/1	1	1
		380/400/50/3	1	1
		460/60/3		1
E-0390	TERMBLK SECTION END BARRIER	208/230/60/1	1	1
		208/230/60/3		1
		220/240/50/1	1	1
		277/60/1	1	1
		380/400/50/3	1	1
		460/60/3		1
E03-0170	RELAY 1P2T 24V 50/60HZ	208/230/60/1	1	1
		208/230/60/3		1
		220/240/50/1	1	1
		277/60/1	1	1
		380/400/50/3	1	1
		460/60/3		1

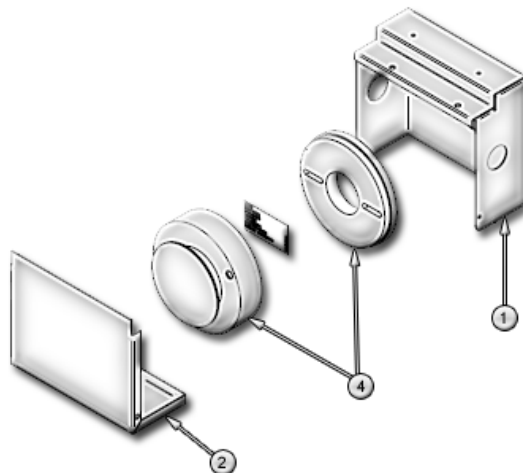
## 10. Miscellaneous Section

### 10.1. Smoke Detector



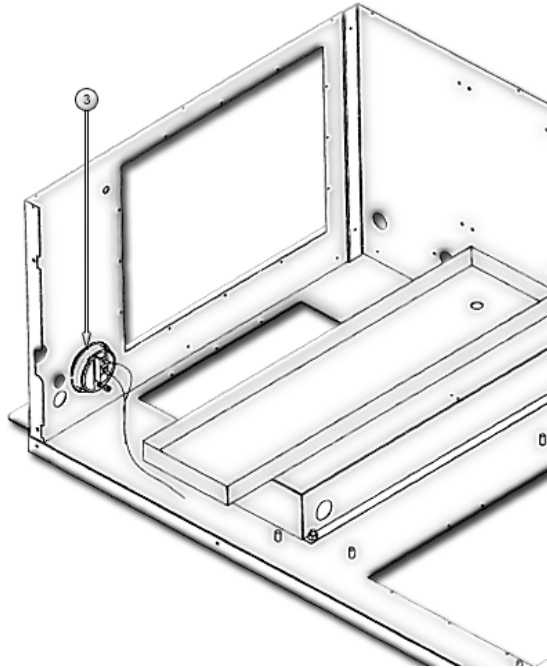
Item	Part Number	Description	Voltage	2T	3T
1	128230P1	TUBE SAMPLING SMOKE DETECTOR	277/60/1	1	1
			460/60/3		1
2	-	SMOKE DETECTOR ENCLOSURE ASSEMBLY	-	-	-
10	S04-0420	Tubing Vinyl Clear 3/4ID	All	1	1
17	124502P2	PWA SMOKE DET CNTL 24VDC 2CONN	All	1	1

#### 10.1.1. Smoke Detector Enclosure Assembly



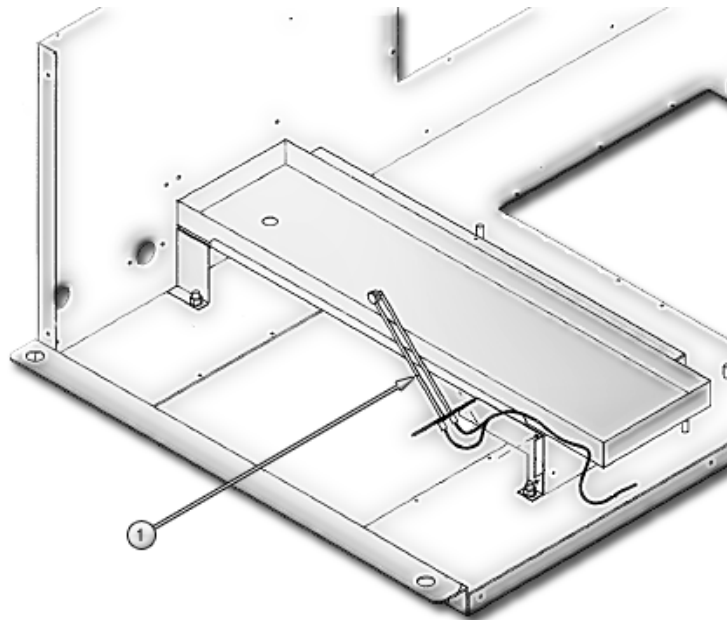
Item	Part Number	Description	Voltage	2T	3T
1	149100P1	BOX SMOKE DETECTOR 731U	All	1	1
2	149101P1	COVER SMOKE DETECTOR 731L	All	1	1
4	149105P1	SMOKE DETECT BASE & HEAD 731L	All	1	1

### 10.2. Filter Clog



Item	Part Number	Description	Voltage	2T	3T
3	154020P1	SWITCH AIR DIFFNTL/CLOGGED FILTER	All	1	1

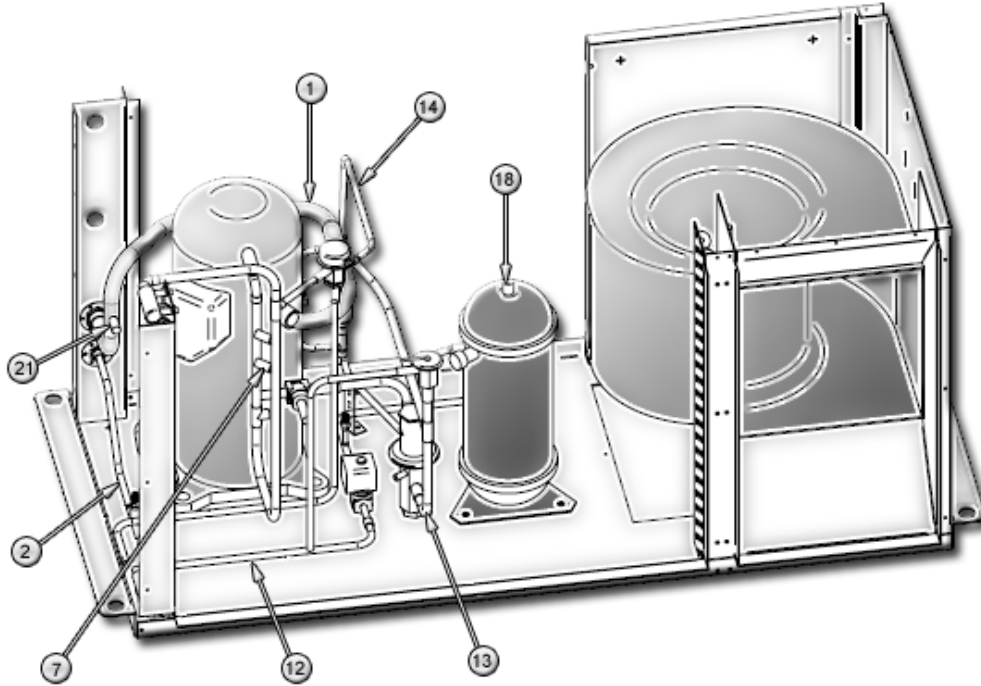
### 10.3. Fire Stat



Item	Part Number	Description	Voltage	2T	3T
1	154213P1	FIRESTAT OPEN ON RISE MM2	All	1	1

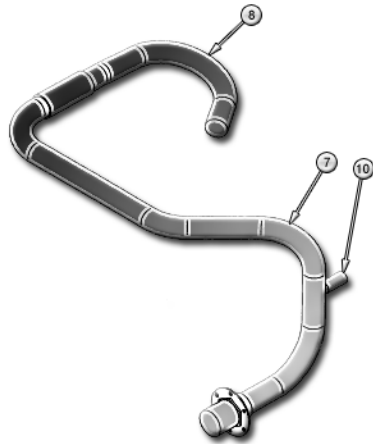
## 11. Piping Section

### 11.1. Air Cooled



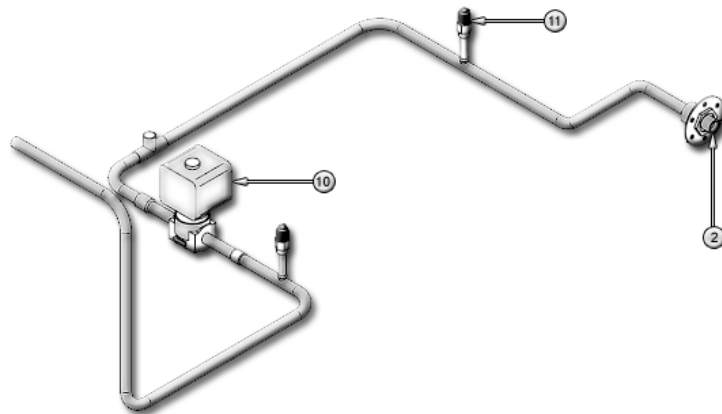
Item	Part Number	Description	Voltage	2T	3T	3.5T
1	-	HGBP SUCTION LINE	-	-	-	-
2	-	HGBP LIQUID LINE	-	-	-	-
7	180970P1	PRESS SW HP SPDTAR C/OUT 400PS	All	1	1	1
12	-	HGBP HPCV	-	-	-	-
13	-	HGBP 3T	-	-	-	-
14	-	HIGH PRESSURE CVBP	-	-	-	-
18	187673P1	VALVE RELIEF 480# 1/4NPT X 3/8	All	1	1	1
21	P02-0290	VALVE CORE REFRIGERANT	All	2	2	2

**11.1.1. HGBP SUCTION LINE**

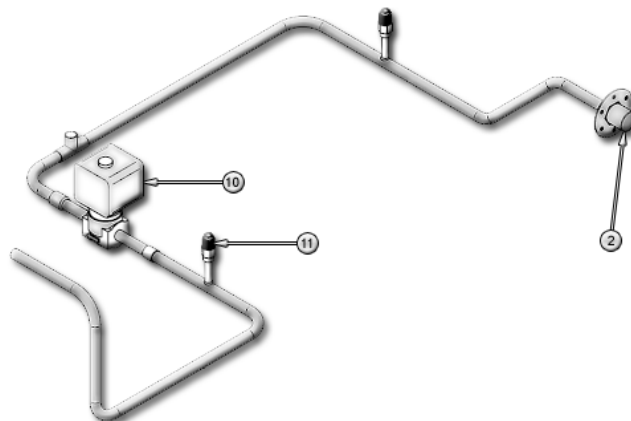


Item	Part Number	Description	Voltage	2T	3T	3.5T
7	156085P2	TUBE FORM CU 7/8 SCTN	All	1	1	1
8	156085P3	TUBE FORM CU 7/8 SCTN	All	1	1	1
10	P02-0270	VALVE ACCESS BODY 1/4X SWT	All	1	1	1

**11.1.2. HGBP LIQUID LINE**



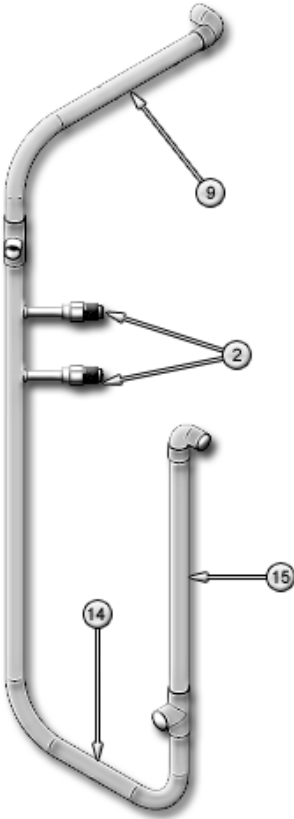
2T



3T

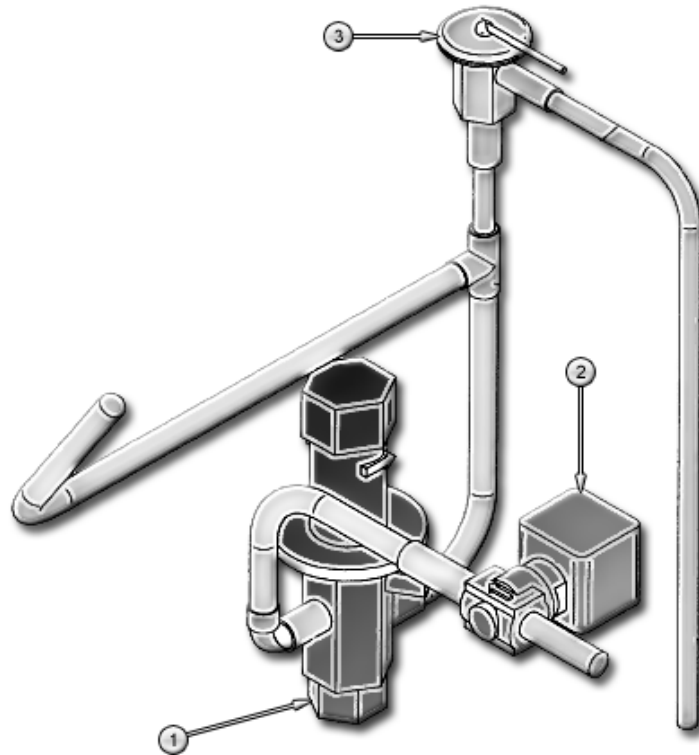
Item	Part Number	Description	Voltage	2T	3T	3.5T
2	1C19509P5	COUPLING M 0.63 THD X 0.38" ID	All	1	1	1
10	127935P5	VALVE SOLND 3/8ODFXODM NO COIL	All	1	1	1
11	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	All	1	1	1

11.1.3. HGBP HPCV



Item	Part Number	Description	Voltage	2T	3T	3.5T
2	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	All	2	2	2
9	156227P1	TUBE FORM CU 1/2 DSCH	All	1	1	1
11	156226P2	TUBE FORM CU 1/2 DSCH	All	1	1	1
15	9A20002P25	TUBE STR CU 1/2X.028X 8.00"	All	1	1	1

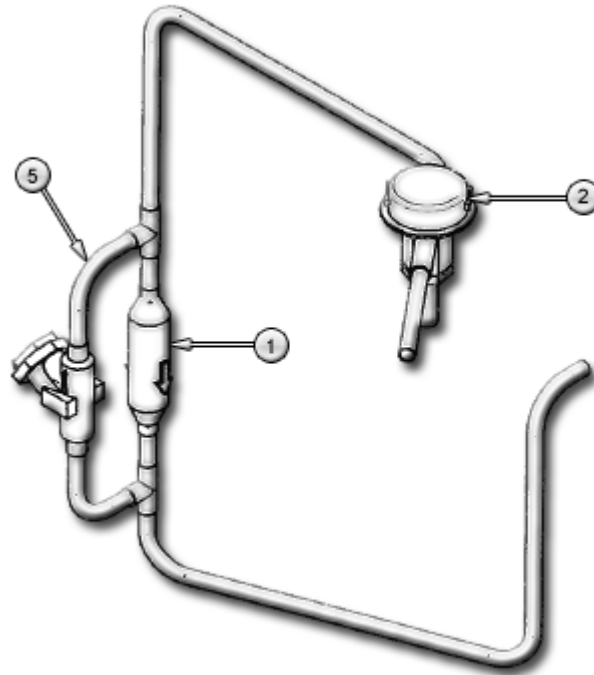
11.1.4. HGBP 3T



Item	Part Number	Description	Voltage	2T	3T	3.5T
1	P-0180	VALVE BYPASS/DISCH 1/2ODF SLDR	All	1	1	1
2	127935P8	VALVE SOLND 1/2ODFXODM NO COIL	All	1	1	1
3	148250P3	VALVE SOLND 1/2ODFXODM NO COIL	All	1	1	1



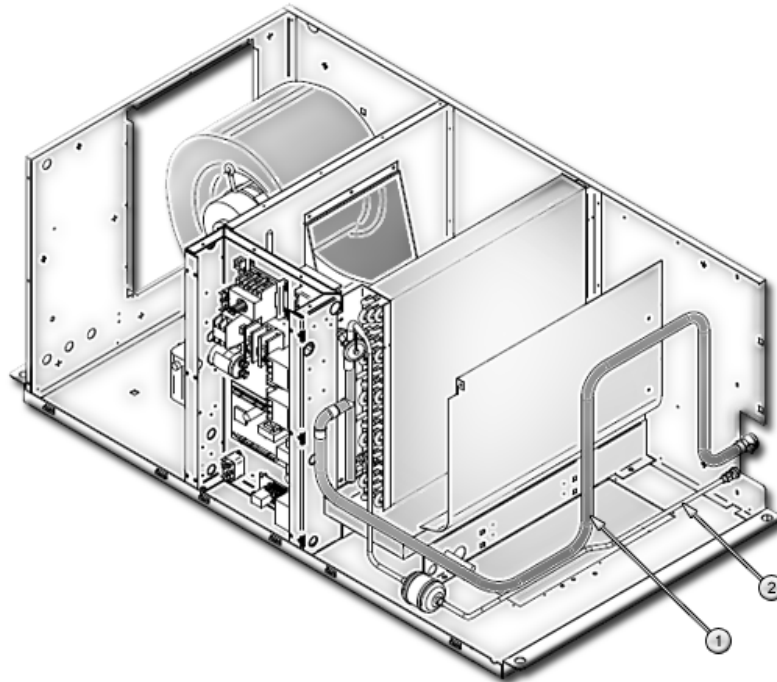
**11.1.5. High Pressure CVBP**



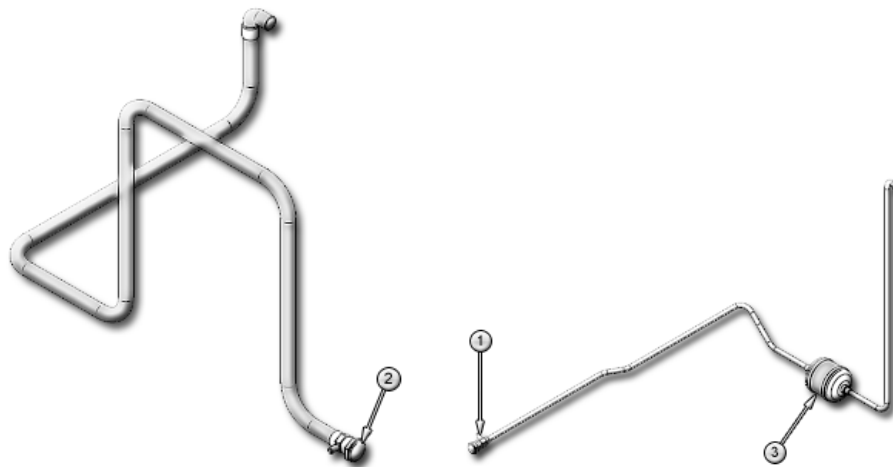
Item	Part Number	Description	Voltage	2T	3T	3.5T
1	W-0091	VALVE CHECK 1/2" OD	All	1	1	1
2	1C21207P5	VALVE LOW AMB CNTL-SPORLAN	All	1	1	1
5	167771G1	PIPG VLV CHECK BYPASS 3/8	All	1	1	1

## 11.2. Split System

### 11.2.1. 2/3T



1	SUCTION LINE
2	LIQUID LINE

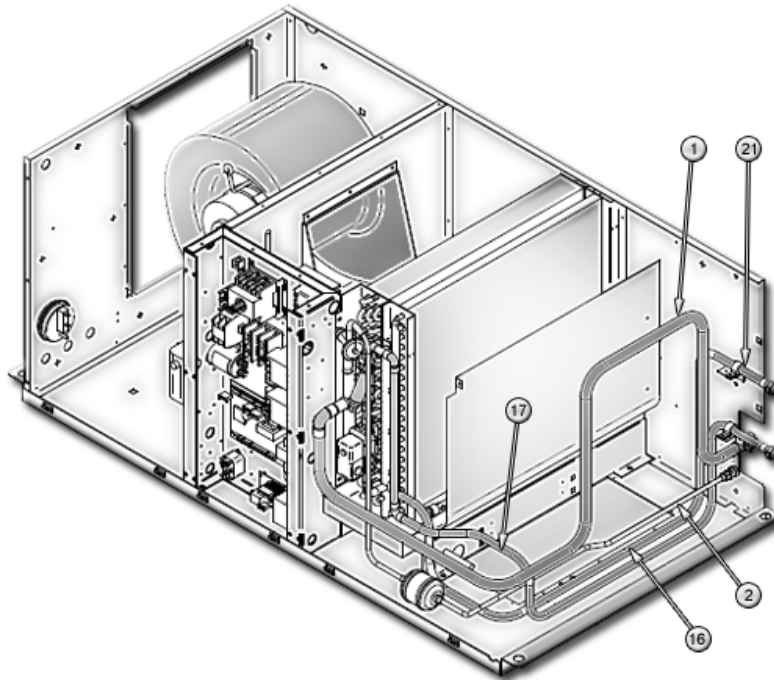


Suction Line

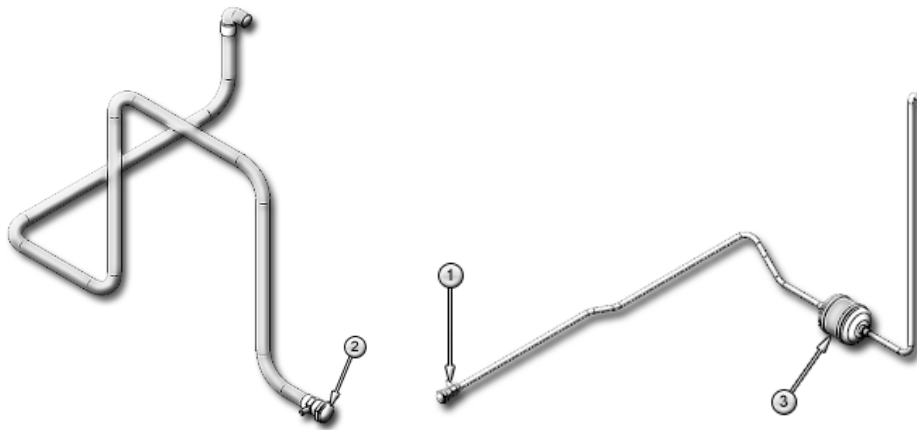
Liquid Line

Item	Part Number	Description	Voltage	2T	3T	3.5T
2	1C19508P2	COUPLING F 1.13 THD X 0.88" ID	All	1	1	1
1	1C19508P1	COUPLING F 0.63 THD X 0.38" ID	All	1	1	1
3	P03-0030	FILTER/DRIER 3/8ODF SLDR	All	1	1	1

**11.2.2. 2/3T with HWRH**



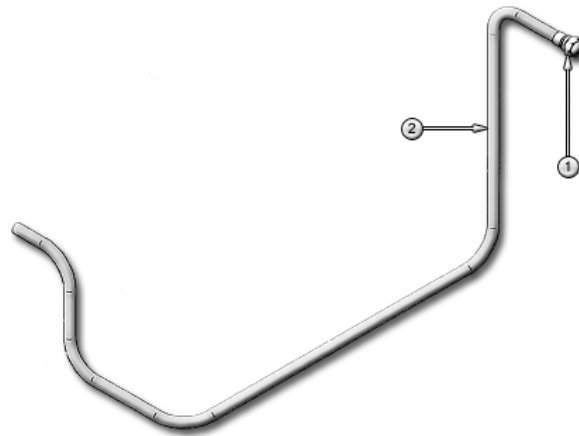
Item	Part Number	Description	Voltage	2T	3T	3.5T
1	-	SUCTION LINE	-	-	-	-
2	-	PIPING LIQUID LINE – SPLIT SYSTEM	-	-	-	-
16	-	PIPING RETURN HWRH EVAPORATOR	-	-	-	-
17	-	PIPING HWRH EVAPORATOR	-	-	-	-
21	P-3460	CLAMP INSULATED METAL 5/8"	All	2	2	2



Suction Line

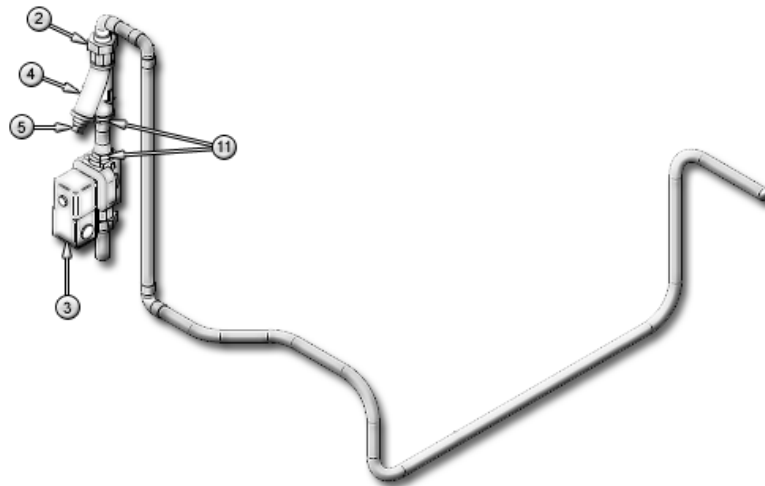
Liquid Line

Item	Part Number	Description	Voltage	2T	3T	3.5T
2	1C19508P2	COUPLING F 1.13 THD X 0.88" ID	All	1	1	1
1	1C19508P1	COUPLING F 0.63 THD X 0.38" ID	All	1	1	1
3	P03-0030	FILTER/DRIER 3/8ODF SLDR	All	1	1	1



Return Line

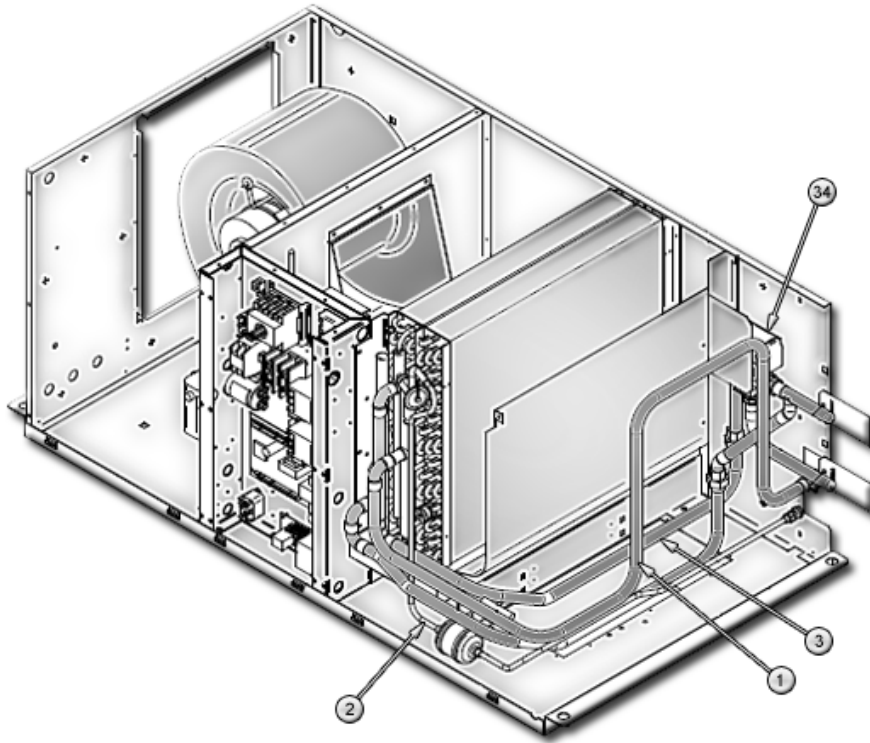
Item	Part Number	Description	Voltage	2T	3T	3.5T
1	P05-4500	ADAPTER CU CXF 5/8"X1/2"	All	1	1	1
2	156315P1	TUBE FORM CU 5/8 WTR SPC	All	1	1	1



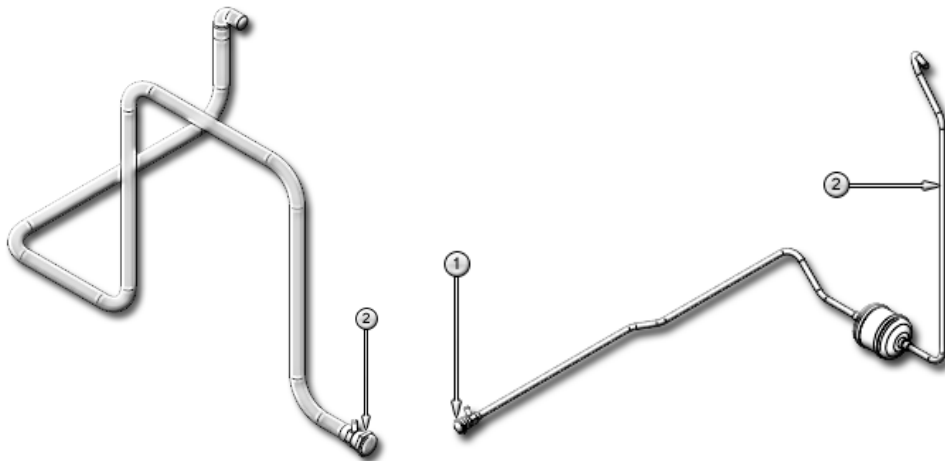
Supply Line

Item	Part Number	Description	Voltage	2T	3T	3.5T
2	P-2380	UNION CU CXM 5/8"X1/2"	All	2	2	2
3	1A23985P1	VALVE SOLND 1/2" NC 24V 50/60	All	1	1	1
4	R-0520	STRAINER -Y- 1/2" CI	All	1	1	1
5	1A31968P1	PLUG PIPE 1/4" SQHD CI	All	1	1	1
11	P-1190	ADAPTER CU CXM 5/8"X1/2"	All	1	1	1

### 11.2.3. 2/3T with Freecooling



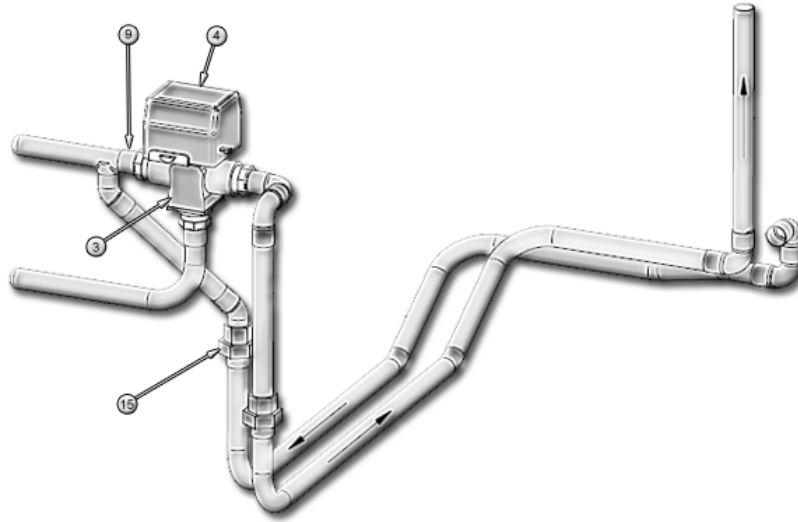
Item	Part Number	Description	Voltage	2T	3T	3.5T
1	-	SUCTION LINE	-	-	-	-
2	-	PIPING LIQUID SPLIT SYSTEM	-	-	-	-
3	-	PIPING FREECOOLING	-	-	-	-
34	135690P1	TERMCSL.156 24-18G 100DNINS	All	2	2	2



Suction Line

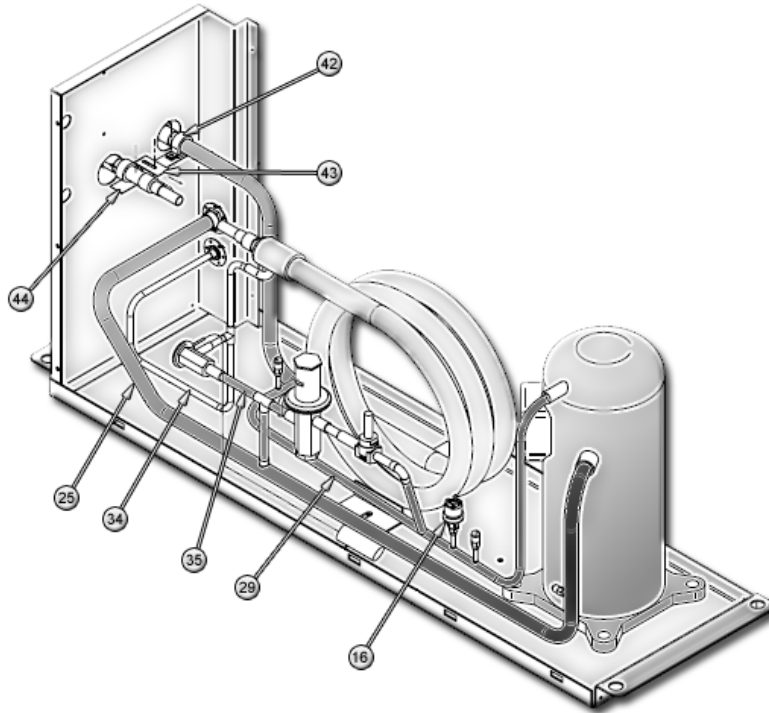
Liquid Line

Item	Part Number	Description	Voltage	2T	3T	3.5T
2	135690P1	TERMCSL.156 24-18G 100DNINS	All	2	2	2
1	1C19508P1	COUPLING F 0.63 THD X 0.38" ID	All	1	1	1
2	P03-0030	FILTER/DRIER 3/8ODF SLDR	All	1	1	1



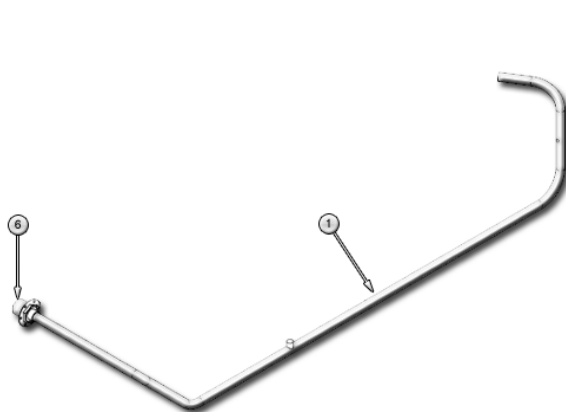
Item	Part Number	Description	Voltage	2T	3T	3.5T
3	192472P3	VALVE H2O SLOW 3WAY 1"	All	1	1	1
4	192472P2	ACTUATOR ON/OFF MM2	All	1	1	1
9	156043P1	ADAPTER CU CXM 7/8"X 1	All	1	1	1
15	P-0840	UNION CU CXC 7/8"SWT	All	1	1	1

### 11.2.4. Water Glycol

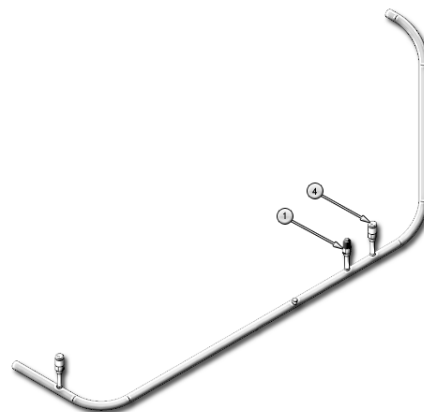


2T HGBP

Item	Part Number	Description	Voltage	2T	3T	3.5T
16	180970P1	PRESS SW HP SPDTR C/OUT 400PS	All	1	1	1
25	-	SUCTION LINE	-	-	-	-
29	-	DISCHARGE LINE	-	-	-	-
34	-	LIQUID LINE	-	-	-	-
35	-	HGBP ASSEMBLY	-	-	-	-
42	P-3820	CLAMP INSULATED METAL 7/8"	All	1	1	1
43	1C18218P1	SUPPORT PIPG MM	All	1	1	1
44	156558P1	SUPPORT PIPG WG MM2	All	1	1	1

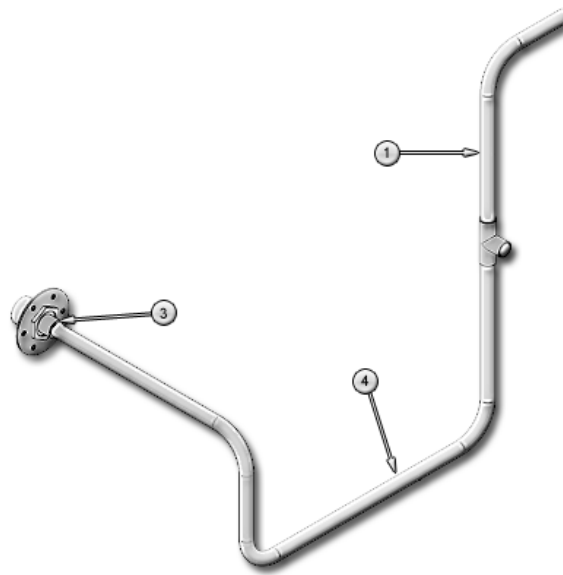


Suction Line



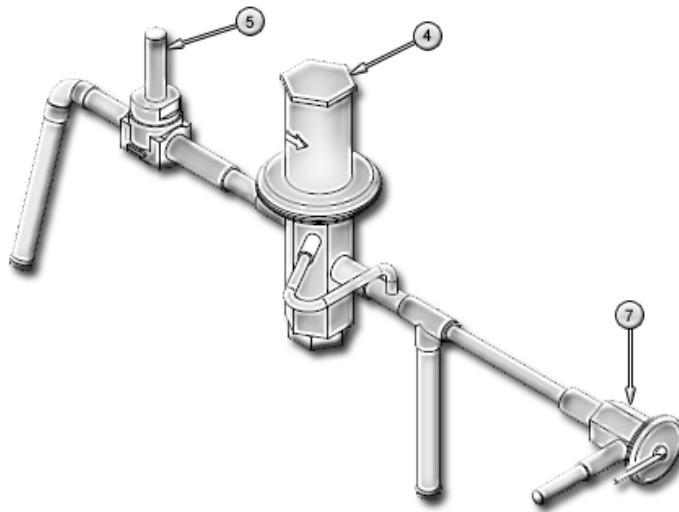
Discharge Line

Item	Part Number	Description	Voltage	2T	3T	3.5T
1	156059P2	TUBE FORM CU 5/8 SCTN	All	1	1	1
6	1C19509P1	COUPLING M 1.13 THD X 0.63" ID	All	1	1	1
1	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	All	3	3	3
4	P02-0290	VALVE CORE REFRIGERANT	All	2	2	2



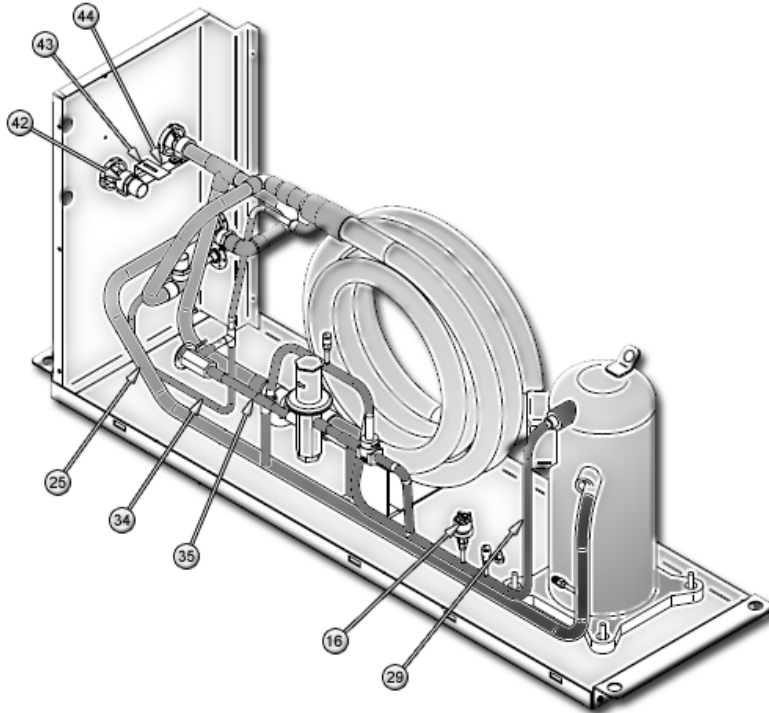
Liquid Line

Item	Part Number	Description	Voltage	2T	3T	3.5T
1	156058P3	TUBE FORM CU 3/8 LOUD	All	1	1	1
3	1C19509P5	COUPLING M 0.63 THD X 0.38" ID	All	1	1	1
4	156058P2	TUBE FORM CU 3/8 LOUD	All	1	1	1



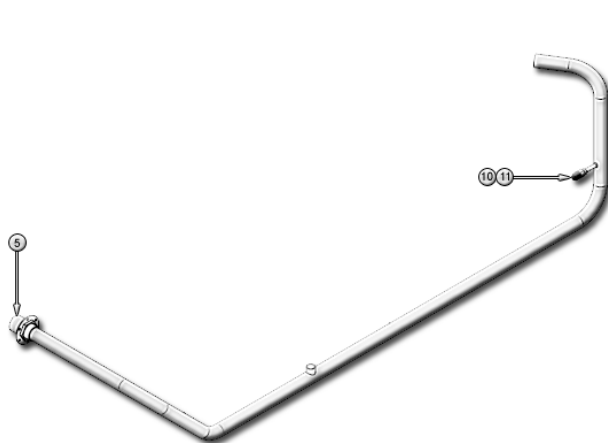
Item	Part Number	Description	Voltage	2T	3T	3.5T
4	P-0180	VALVE BYPASS/DISCH 1/2ODF SLDR	All	1	1	1
5	127935P1	VALVE SOLND 1/2ODFXODM NO COIL	All	1	1	1
7	148250P2	VALVE LIV 1/2T 3/8X3/8 ANGLE	All	1	1	1



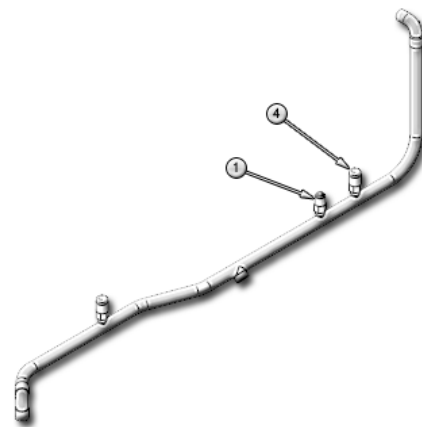


3/3.5T HGBP

Item	Part Number	Description	Voltage	2T	3T	3.5T
16	180970P1	PRESS SW HP SPDTAR C/OUT 400PS	All	1	1	1
25	-	SUCTION LINE	-	-	-	-
29	-	DISCHARGE LINE	-	-	-	-
34	-	LIQUID LINE	-	-	-	-
35	-	HGBP ASSEMBLY	-	-	-	-
42	P-3820	CLAMP INSULATED METAL 7/8"	All	1	1	1
43	1C18218P1	SUPPORT PIPG MM	All	1	1	1
44	156558P1	SUPPORT PIPG WG MM2	All	1	1	1

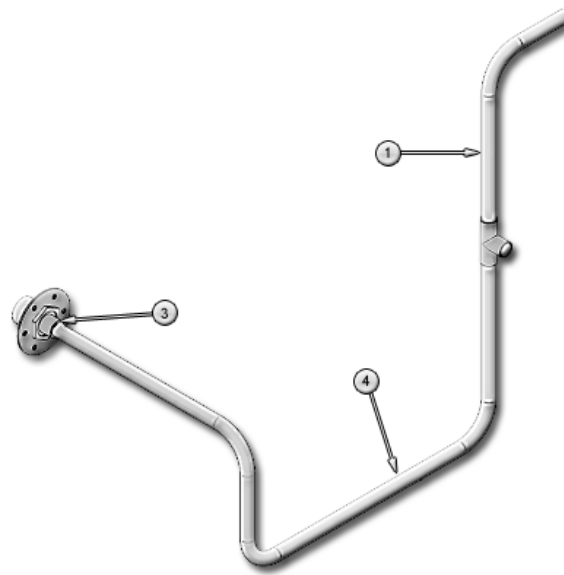


Suction Line



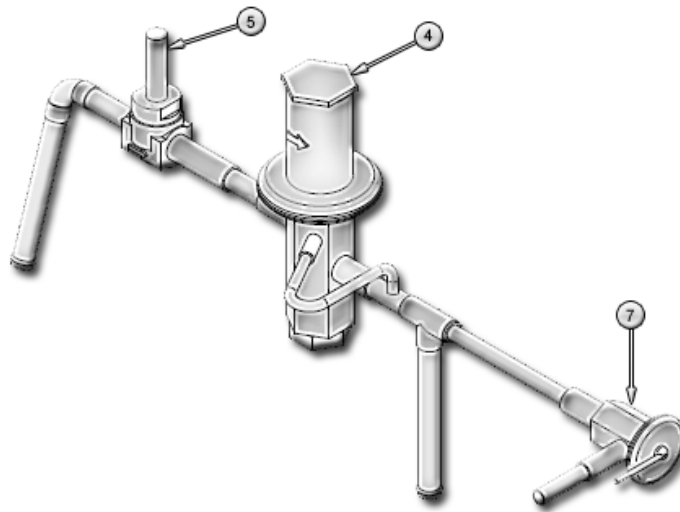
Discharge Line

Item	Part Number	Description	Voltage	2T	3T	3.5T
5	1C19509P2	COUPLING M 1.13 THD X 0.88" ID	All	1	1	1
10	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	All	1	1	1
11	187933G2	VALVE ACC BODY 1/4 EXT1" BEAD	All	1	1	1
1	P02-0270	VALVE ACCESS BODY 1/4X SWT	All	3	3	3
4	P02-0290	VALVE CORE REFRIGERANT	All	2	2	2



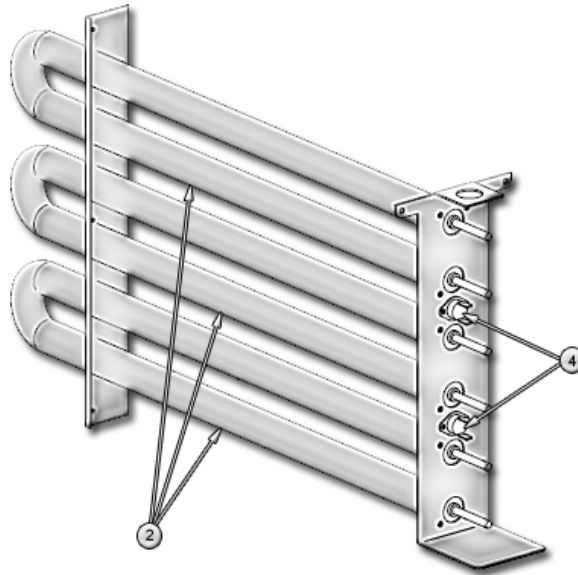
Liquid Line

Item	Part Number	Description	Voltage	2T	3T	3.5T
1	156058P3	TUBE FORM CU 3/8 LOUD	All	1	1	1
3	1C19509P5	COUPLING M 0.63 THD X 0.38" ID	All	1	1	1
4	156058P2	TUBE FORM CU 3/8 LOUD	All	1	1	1



Item	Part Number	Description	Voltage	2T	3T	3.5T
4	P-0180	VALVE BYPASS/DISCH 1/2ODF SLDR	All	1	1	1
5	127935P1	VALVE SOLND 1/2ODFXODM NO COIL	All	1	1	1
7	148250P2	VALVE LIV 1/2T 3/8X3/8 ANGLE	All	1	1	1



## 12. Reheat Section




Item	Part Number	Description	Voltage	2T	3T
2	148366P11	HEATER 02.3KW 240V SS 304 S/F	208/230/60/1	3	
			208/230/60/3	3	3
			220/240/50/1	3	
			380/400/50/3	3	
	148366P12	HEATER 02.3KW 277V SS 304 S/F	277/60/1	3	
			460/60/3		3
	148366P13	HEATER 03.3KW 240V SS 304 S/F	208/230/60/1		3
			208/230/60/3		3
			220/240/50/1		3
			380/400/50/3		3
	148366P14	HEATER 03.3KW 277V SS 304 S/F	277/60/1		3
			460/60/3		3
148366P15	HEATER 02.0KW 240V SS 304 S/F	208/230/60/1	3	3	
		220/240/50/1	3	3	
148366P16	HEATER 02.0KW 277V SS 304 S/F	277/60/1	3	3	
4	136965P1	SAFETY SWT THERM 105F	208/230/60/1	2	2
			208/230/60/3		2
			220/240/50/1	2	2
			277/60/1	2	2
			380/400/50/3	2	2
			460/60/3		2

### 13. Parts Gallery

#### Blower Section

	
1C19516P1	1C19516P1





#### Coil Section

			
1A18660P1	1A19716P1	156103P1	156140P1
			
156153G1	168166P1		

#### Compressor Section

	
1A17649P1	138430P1

#### Condenser Section

			
136696P1	156400P1	P02-0290	P-026A
			
P-4760			

**Electrical Section**

			
1C18351P2	123273P1	127661P1	127937P1
			
127977P1	E-0110	E-362B	














**Humidifier Section**

			
1A19592P1	1C11305P1	127853P1	127992P1
			
128759P1	136972P1	154016P1	154240P1
			
154243P1	156060G1	164278G1	164279G1
			
164369G1	P02-0260	P15-0140	




















**Miscellaneous Section**

			
124502P2	128230P1	149100P1	149101P1
			
149105P1	154020P1	154213P1	S04-0420

**Panel Section**

			
1C18352P1	156168P1	156169P1	156170P1
			
156171P1	156356P1	156359P1	156366P1
			
156366P2	156554P1	156556P1	156556P2
			
156557P1			

**Piping Section**

			
1A23985P1	1C18218P1	1C21207P5	127935P1
			
127935P8	148250P2	156043P1	156558P1
			
167771G1	180970P1	187933G2	198537P1
			
P02-0270	P02-0290	P03-0030	P05-4500
			
P-0180	P-3460	P-3820	R-0520
			
W-0091			

**Reheat Section**

	
136965P1	148366P11

## 14. Revision Page

Version	Revision Date	Modification	Details
00	01/2011	-	Manual Release Date