

# Water-Cooled Chiller Magnetic Bearing Compressor

WMC  
Vintage B  
145SBS  
145DBS  
150DBS  
250DBS  
290DBS



# Contents

Parts List Revision History.....	3
Complete Model Nomenclature .....	4 - 5
Electrical Legend .....	6
Unit Components.....	7 - 8
Magnetic Bearing Compressor.....	9 - 13
Piping - Discharge .....	14
Piping - Liquid Line and Motor Cooling.....	15
Condenser- Standard Heads.....	16
20 inch, 150 PSI Standard Heads, Victaulic - 1 Pass, non-ASME.....	17
20 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME.....	17
20 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 3 Pass, non-ASME.....	17
22 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME.....	18
22 Inch, 300 PSI Standard Heads, Flanged - 2 Pass, non-ASME .....	18
22 inch, 150 PSI Standard Heads, Victaulic - 3 Pass, non-ASME.....	18
Condenser- Water Box Heads.....	19
20 Inch, 150 PSI Water Box Heads, Victaulic and Flanged - 2 Pass, non-ASME .....	20
22 Inch, 150 PSI Water Box Heads, Victaulic and Flanged - 2 Pass, non-ASME .....	21
Evaporator- Standard Heads .....	22
22 Inch, 150 PSI Standard Heads, Victaulic - 1 Pass, non-ASME.....	23
22 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME.....	23
22 Inch, 150 PSI Standard Heads, Victaulic - 3 Pass, non-ASME.....	23
26 Inch, 150 PSI Standard Heads, Victaulic - 1 Pass, non-ASME.....	24
26 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME.....	24
26 Inch, 300 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME.....	24
26 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 3 Pass, non-ASME.....	24
Evaporator- Water Box Heads .....	25
22 Inch, 150 PSI Water Box Heads, Victaulic and Flanged - 2 Pass, non-ASME .....	26
22 Inch, 150 PSI Standard Heads, Flanged - 3 Pass, non-ASME.....	26
26 Inch, 150 PSI Water Box Heads, Victaulic and Flanged - 2 Pass, non-ASME .....	27
Evaporator Insulation.....	28
Unit Controls.....	29
Operator Interface Panel .....	29
Unit Control Box Diagram.....	30
Unit Control Box.....	31
Power Panel Diagrams .....	32
Power Panel - Unit Size 145S.....	33 - 34
Power Panel - Unit Sizes 145D & 150D .....	35 - 37
Power Panel - Unit Sizes 250D & 290D .....	38 - 40
Control Box Label.....	41



# Complete Model Nomenclature

**WMC** 250D BS 15R YY Y B E2609 BE 2RA C4 0440 CC Y A C2209 BLYY 2RAYYY  
 Code    02    03    04    05   06   07    08    09    10    11    12    13   14   15    16    17    18

C4 1050 CCYY YY A A 134 124 DY 3LEYA SSYDYYYS 0170 Y YY B  
 Code   19    20    21    22   23   24    25    26    27    28                    29                    30    31   32   33

- |   |   |
|---|---|
| <p><b>02 Size (in nominal tons)</b><br/>         145S= 145 Tons, Single Compressor<br/>         145D= 145 Tons, Dual Compressors<br/>         150D= 150 Tons, Dual Compressors<br/>         250D= 250 Tons, Dual Compressors<br/>         290D= 290 Tons, Dual Compressors</p> <p><b>03 Unit Configuration</b><br/>         BS= Vintage B, Single Circuit</p> <p><b>04 Voltage</b><br/>         13G or 15G= 400V / 50Hz<br/>         13R or 15R= 460V / 60Hz<br/>         13D = 575V / 60Hz</p> <p><b>05 Always YY</b></p> <p><b>06 Always Y</b></p> <p><b>07 Compressor Model Revision</b><br/>         A= Compressor Revision A<br/>         B= Compressor Revision B</p> <p><b>08 Evaporator</b><br/>         E2209= 22" Diameter, 9 ft. length<br/>         E2212= 22" Diameter, 12 ft. length<br/>         E2609= 26" Diameter, 9 ft. length<br/>         E2612= 26" Diameter, 12 ft. length</p> <p><b>09 Evaporator Tubes</b><br/>         Digit 1<br/>         Tube Count<br/>         Digit 2<br/>         E= 0.025 wall, CU Turbo, EHP<br/>         F= 0.028 wall, CU Turbo, EHP<br/>         Q= 0.035 wall, CU Turbo, EHP<br/>         T= 0.028 wall SS 28FPI-TC<br/>         Z= 0.028 wall Titanium 32FPI-TC</p> <p><b>10 Evaporator Heads</b><br/>         Digit 1<br/>         1= 1 pass<br/>         2= 2 Pass<br/>         3= 3 Pass<br/>         Digit 2<br/>         R= Right Hand Inlet Nozzle<br/>         L= Left hand Inlet Nozzle<br/>         Digit 3<br/>         A= Standard Victaulic<br/>         B= Flanged<br/>         C= Marine Box, Top, Victaulic<br/>         E= Marine Box, Top, Flanged</p> | <p><b>11 Evaporator Design Pressure</b><br/>         Digit 1<br/>         C= 200 PSIG Refrigerant Side<br/>         Digit 2<br/>         1= 150 PSIG Waterside, ASME Code<br/>         2= 250 PSIG Waterside, ASME Code<br/>         3= 350 PSIG Waterside, ASME Code<br/>         4= 150 PSIG Waterside, non-ASME Code<br/>         5= 300 PSIG Waterside, non-ASME Code</p> <p><b>12 Evaporator Leaving Water Temperature</b><br/>         Degrees Fahrenheit x 10</p> <p><b>13 Evaporator Tube Sheet &amp; Head Material</b><br/>         Digit 1<br/>         C= Carbon Steel Tube Sheet<br/>         Digit 2<br/>         C= Carbon Steel Heads</p> <p><b>14 Always Y</b></p> <p><b>15 Evaporator Model Revision</b><br/>         A= Evaporator Revision A</p> <p><b>16 Condenser</b><br/>         C2009= 20" Diameter, 9 ft. length<br/>         C2012= 20" Diameter, 12 ft. length<br/>         C2209= 22" Diameter, 9 ft. length<br/>         C2212= 22" Diameter, 12 ft. length</p> <p><b>17 Condenser Tubes</b><br/>         Digit 1<br/>         Tube Count<br/>         Digit 2<br/>         L= 0.025 wall, CU Turbo, CSL<br/>         N= 0.028 wall, CU Turbo CSL<br/>         P= 0.035 wall, CU Turbo CSL<br/>         1= 0.028 wall, 90-10 CuNi<br/>         4= 0.035 wall, 90-10 CuNi<br/>         T= 0.028 wall, SS 28FPI-TC<br/>         Z= 0.028 wall, Titanium 32FPI-TC<br/>         Digits 3-4<br/>         Always YY</p> <p><b>18 Condenser Heads</b><br/>         Digit 1<br/>         1= 1 pass<br/>         2= 2 Pass<br/>         3= 3 Pass<br/>         Digit 2<br/>         R= Right Hand Inlet Nozzle<br/>         L= Left hand Inlet Nozzle<br/>         Digit 3<br/>         A= Standard Victaulic<br/>         B= Flanged<br/>         D= Marine Box, Rear, Victaulic<br/>         F= Marine Box, Rear, Flanged<br/>         Digits 4-6<br/>         Always YYY</p> |
|---|---|

# Complete Model Nomenclature

## 19 Condenser Design Pressure

Digit 1

C= 200 PSIG Refrigerant Side

Digit 2

1= 150 PSIG Waterside, ASME Code

2= 250 PSIG Waterside, ASME Code

3= 350 PSIG Waterside, ASME Code

4= 150 PSIG Waterside, non-ASME

5= 300 PSIG Waterside, non-ASME

## 20 Condenser Max Leaving Water Temperature

Degrees Fahrenheit x 10

## 21 Condenser Tube Sheet & Head Material

Digit 1

C= Carbon Steel Tube Sheet

N= Monel Clad

S= Stainless Steel Clad

T= Titanium Clad Steel

Digit 2

C= Carbon Steel Heads

E= Exopy Coated

Digits 3-4

Always YY

## 22 Always YY

## 23 Condenser Model Revision

A= Condenser Revision A

## 24 Pressure Vessel Code

A= ASME

J= Australia ASME with documentation

P= Chinese

T= Taiwan ASME with documentation

1= CRN British Columbia

2= CRN Alberta

3= CRN Saskatchewan

4= CRN Manitoba

5= CRN Ontario

6= CRN Quebec

7= CRN New Brunswick

8= CRN Nova Scotia

9= CRN Prince Edward Island

0= CRN Newfoundland

U= CRN Yukon

## 25 Refrigerant

134= Refrigerant 134a

## 26 Refrigerant Weight

example: 124= 1240 lbs divided by 10

## 27 Expansion Valve

DY= Electronic Expansion Valve, single actuator

EY= Electronic Expansion Valve, dual actuator

## 28 Controls

Digit 1

3= Microtech II, pCO3

Digit 2

L= Large Controller

Digit 3

E= English Language

Digit 4

Always Y

Digit 5

B= BACnet w/ RS485 and Ethernet

E= BACnet w/ IP Ethernet

L= LonMark

M= ModBus

P= Serial Port w/RS232

Y= None

Digit 6

A= NEMA 1

## 29 Front End Box Options

Digit 1

S= Single Point

M= Multi Point

Digit 2

S= Unit Mounted Single Box

Digit 3

Y= Standard Filter

P= EMI Filter

Digit 4

D= Disconnect Switch

P= Power Block

Digit 5

Always Y

Digit 6

Y= Standard Short Circuit Current Rating

H= High Short Circuit Current Rating

Digit 7

Y= No Ground Fault Protection

F= With Ground Fault Protection

Digit 8

S= No Harmonic Filter

F= Free Standing Harmonic Filter

M= Unit Mounted Harmonic Filter

## 30 Rated Load Amps

Compressor RLA

## 31 Always Y

## 32 Insulation

Digit 1

H= 3/4" insulation on Evap Shell, Suction Piping,

Compressor Inlet, Motor Barrel, plus High Humidity

3= 1-1/2" insulation on Evap shell; 3/4" on Suction

Piping, Compr Inlet, Mtr Barrel, plus High Humidity

Y= No Shell Insulation

Digit 2

2= Evaporator Return and Connection Head Insulation

Y= No Head Insulation

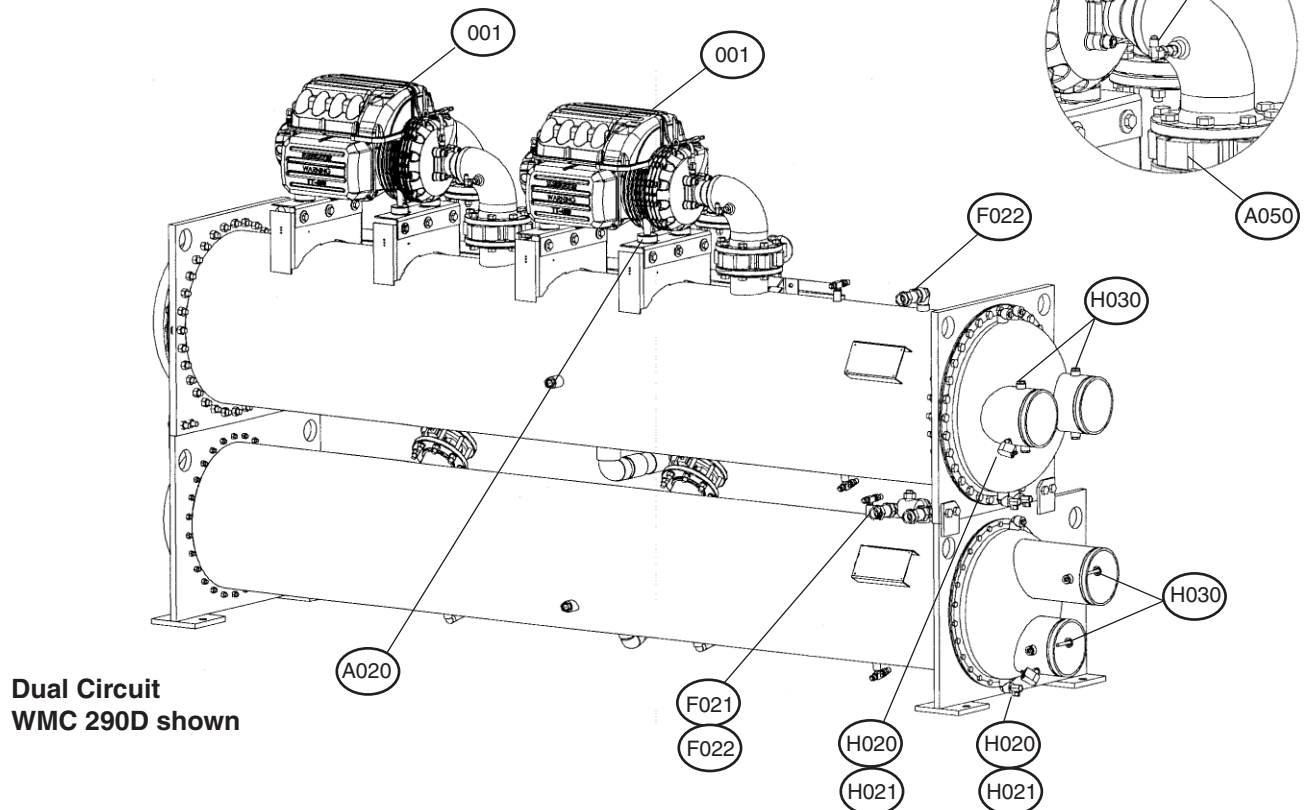
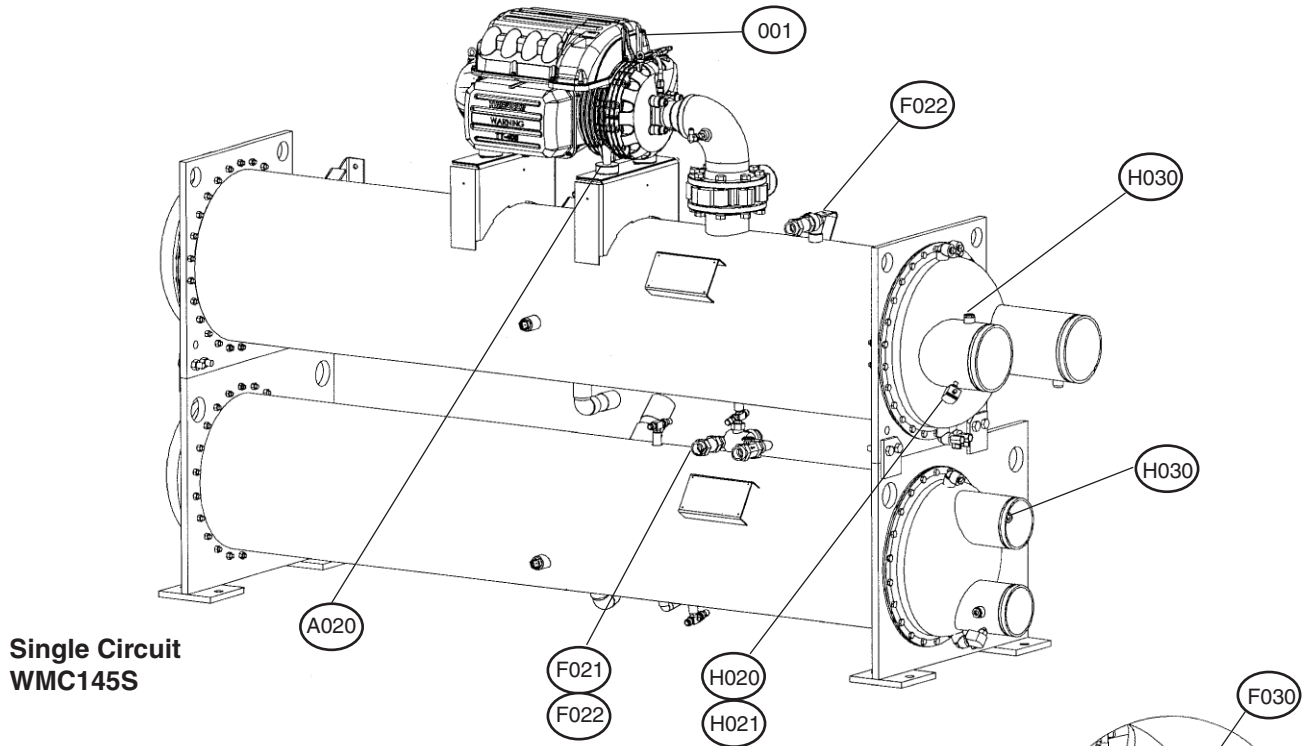
## 33 Water Flow Indication

B= Water Flow Indicator on Evaporator and Condenser

# Electrical Legend

A .....	Alarm	LR .....	Latch Relay
B1-B10.....	Analog Input Connections	MA .....	Contactora Auxillary
CAP .....	Capacitor	MC .....	Motor Cooling Solenoid
CB.....	Circuit Breaker	MCR .....	Motor Contactor Relay (Starter)
CBX .....	Compressor Box	MHP .....	Mechanical High Pressure Switch
CC .....	Compressor Controller	NO1-18, NC1-18.....	Digital Output Connections
CF.....	Condenser Flow Switch	OC .....	Oil Cooler Solenoid (120 or 24 VAC)
CO .....	Compressor Off Relay	OL .....	Overload
CP1 & CP2 .....	Condenser Pump Cycling Relay	OP .....	Oil Pump Contactor
CR .....	Compressor Relay	PTB.....	Pressure Transducer Board
CT.....	Control Transformer	RL.....	Reactor, Line Side
CWI.....	Condenser Water Interlocks	SA(Unload), SB(Load).....	Vane Control Solenoids
C1 .....	Cooling Tower Fan Relay (Stage 1)	SC.....	Signal Converter
C2 .....	Cooling Tower Fan Relay (Stage 2)	SW1 .....	Unit Start/Stop Switch
C3.....	Cooling Tower Fan Relay (Stage 3)	SW2.....	Compressor Manual Stop Switch
C4.....	Cooling Tower Fan Relay (Stage 4)	SW3.....	Remote Start/Stop Switch
EF.....	Evaporator Flow Switch	SW4.....	Mode Switch
EP1 & 2 .....	Evaporator Pump Cycling Relay	SW5.....	Emergency Stop Switch
EWI.....	Evaporator Water Interlocks	T1 .....	Transformer (120VAC)
EXV .....	Electronic Expansion Valve	T2 .....	Transformer (24VAC)
GDB.....	Guardistor Board	T3 .....	Transformer (24VAC)
GFP .....	Ground Fault Protector	T4 .....	Transformer (24VAC)
HG .....	Hot Gas Solenoid	T5 .....	Transformer (24VAC) / Isolation
HR1 & 2 .....	Heater Relay	VC.....	Vane Close Switch
ID1 thru 18.....	Digital Input Connections	VO .....	Vane Open Switch
IR2 thru 4.....	Isolation Relay for T2 thru T4	VR.....	Voltage Relay
L1.....	Liquid Injection Solenoid	UC .....	Unit Controller

# Unit Components

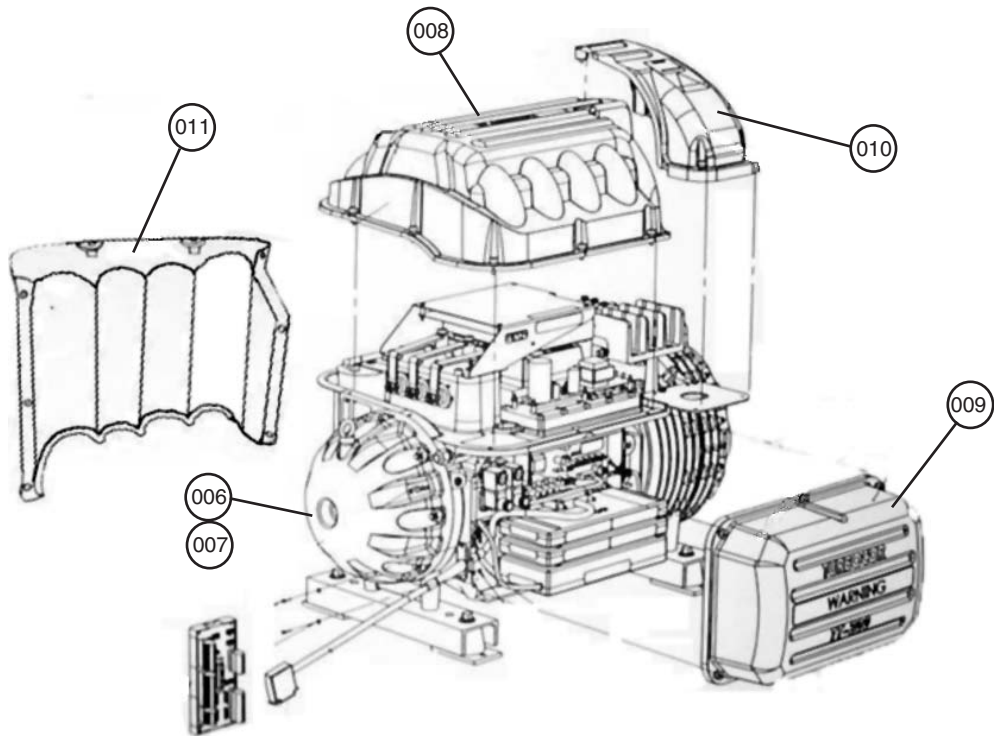
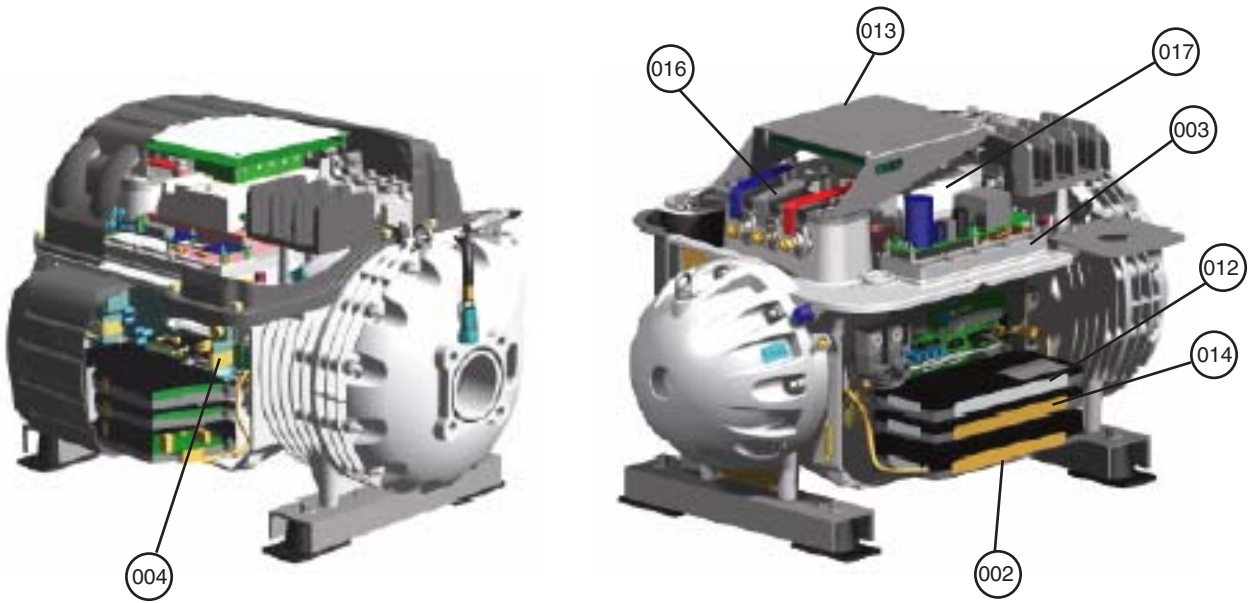


# Unit Components

Ref. #	Description	Part Number	145S	145D	150D	250D	290D
001	Compressor	See Note					
A020	Compressor Isolator	330527701	4	8	8	8	8
A050	Butterfly Valve	073062103	1	2	2	2	2
F021	Shut Off Valve	735039977	1	1	1	1	1
F022	Relief Valve, 200#	735045817	3	3	3	3	3
F030	Relief Valve, 200#, Angle	735045818	1	2	2	2	2
H020	Flow Sensor	330571401	2	2	2	2	2
H021	Cable, Flow Sensor	330571402	2	2	2	2	2
H030	Sensor Well	047441511	6	6	6	6	6

**Note:** Contact McQuay Parts with the compressor model, compressor part number, compressor serial number and BMCC revision. On dual compressor units, provide same information on other compressor to ensure BMCC compatibility.

# Magnetic Bearing Compressor



# Magnetic Bearing Compressor

Ref. #	Description	Part Number	Quantity per compressor	
			145D 150D	145S 250D 290D
002	Kit, Module, Bearing PWM	300040127	1	1
003	Kit, DC/DC Converter Assy, 400-460V	300042897	1	1
003	Kit, DC/DC Converter, 575V	300048726	1	
004	Kit, Module, Backplane Assy	300042899	1	1
006	Kit, End Cap Assy	300048171	1	1
007	Kit, Insulation Cover, End Bell	300043829	1	1
008	Kit, Cover, Top Assy	300040136	1	1
009	Kit, Cover, Service Side Assy	300040137	1	1
010	Kit, Cover, Mains Input Assy	300040138	1	1
011	Kit, Cover, Capacitor Assy	300040139	1	1
012	Kit, Module Serial Driver	300043064	1	1
013	Kit, Module, Softstart, 400V	300043853	1	1
013	Kit, Module, Softstart, 460V	300043245	1	1
013	Kit, Module Softstart, 575V	300049167	1	
014	Kit, Bearing Motor Compressor Control (BMCC)	<b>See Note</b>	1	
016	Kit, Input Mains Buss Bars	100416		1
017	Kit, IGBT Manifold Cooling	300040931	1	
017	Kit, IGBT Assy Manifold Cooling (w/o DC/DC Converter)	300043315		1
017	Kit, IGBT Assy Manifold Cooling (w/DC/DC Converter)	300043246		1
NS	Kit, Soft Start Cooling Fan Assembly	300049137	1	1
NS	Kit, PCB Assy, Compressor Interface Connector	300043882	1	1
NS	Communication Converter Module	300049169	1	1
NS	Kit, Terminal Power Block Assy	300043928	1	
NS	Kit, Terminal Power Block Assy	300043983		1
NS	Kit, Cover Plate Assy	300049175	1	1
NS	Kit, Sensor Assy, Temperature, Motor Rotor	300042906	1	1
NS	Kit, Temperature Sensor	300048181	1	1
NS	Kit, Tube, Connection to IGBT	300048170	1	1
NS	Kit, Capacitor, IGBT Snubber	300043447	1	1
NS	Kit, Sensor, Pressure Temperature Suction (blue dot)	300040130	1	1
NS	Kit, Sensor, Pressure Temperature Discharge (red dot)	300040131	1	1

**Note:** Contact McQuay Parts with the compressor model, compressor part number, compressor serial number and BMCC revision. On dual compressor units, provide same information on other compressor to ensure BMCC compatibility.

NS = Not Shown

# Magnetic Bearing Compressor

Ref. #	Description	Part Number	Quantity per compressor	
			145D 150D	145S 250D 290D
NS	Kit, Diode Rectifiers	300043875	1	
NS	Kit, Diode Rectifiers	300044087		1
NS	Kit, Sensor Heatsink Diode Rectifiers Dual Cooling	300047204		1
NS	Kit, Service Valve, Suction	300048174	1	
NS	Kit, Service Valve, Discharge	330619004	1	1
NS	Kit, Service Valve, Economizer	300048958	1	
NS	Kit, Flange 1", Economizer <sup>1</sup>	300048175	1	
NS	Kit, Flange Sweat, 3", Suction <sup>2</sup>	300046266	1	1
NS	Kit, Flange, Suction 3"	300048959	1	1
NS	Kit, Flange, Discharge, Brass, for 2-1/8"	300046267	1	1
NS	Kit, Flange, Discharge, Steel, 2-1/8"	331387401	1	1
NS	Kit, O-Ring, IGBT Assy	300043869	1	1
NS	Kit, O-Ring, Ports Connection <sup>3</sup>	300043968	1	1
NS	Kit, O-Ring, IGV Assy	300043877	1	1
NS	Kit, O-Ring, End Cap Assy	300043878	1	1
NS	Kit, O-Ring, Service Side Small O-Rings	300043879	1	1
NS	Kit, O-Ring, Cover Plate Assy	300043880	1	1
NS	Kit, O-Ring, Suction Port Only	300048180	1	1
NS	Kit, Cable Harness, Compressor DC Supply	200140	1	1
NS	Kit, Cable Harness Assy, Compressor Interface	300047144	1	1
NS	Kit, Cable Harness, Softstart SCR Gate	300044089	1	1
NS	Kit, Cable Harness, Mtr Cooling & Coil Assy	300040132	1	
NS	Kit, Cable Harness, Mtr Cooling & Coil Assy	300048754		1
NS	Kit, Cable Harness, Compressor Controller	300044030	1	1
NS	Kit, Cable Harness, Front Bearing Sensor	300047965	1	1
NS	Kit, Cable Harness, Rear Bearing Sensor	300047966	1	1
NS	Kit, Cable Harness, Motor Driver (IGBT to Backplane)	300044114	1	1
NS	Kit, Cable Harness, Softstart AC/DC, Fused	300040953	1	
NS	Kit, Cable Harness, Softstart AC/DC	300048954	1	
NS	Kit, Cable Harness, Softstart AC/DC	300044098	1	1
NS	Cable Harness Compressor Controller	300044030	1	1
NS	Cable Harness, DC/DC to Backplane	300047244	1	1

<sup>1</sup> Includes 7/8" Flange, O-Ring, lubrication, and 2 sets of screws/spring washers.

<sup>2</sup> Includes 3-1/8" Flange, O-Ring, lubrication, and 4 sets of screws/spring washers.

<sup>3</sup> Includes O-Rings for Suction, Discharge and Economizer Ports.

NS = Not Shown

# Magnetic Bearing Compressor

Ref. #	Description	Part Number	Quantity per compressor	
			145D 150D	145S 250D 290D
NS	Line Reactor, 140A, 5%	300047659	1	
NS	Line Reactor, 180A, 5%	300045658		1
NS	Line Reactor, 240A, 5%	300048177		1
NS	Line Reactor, 140A, 10%	300044143	1	
NS	Line Reactor, 180A, 10%	331557651		1
NS	EMI/EMC Filter, CE, 185A	300048760	1	
NS	EMI/EMC Filter, UL, 185A	300048179	1	
NS	EMI/EMC Filter 322A, 480V	300048960		1
NS	Kit, Fuse, Class T, Fast Acting	300045202	1	
NS	Fuse, Slo Nano SMF 0.25A, 125V	300046528	1	1
NS	Fuse, Slo Nano SMF 0.5A, 125V <sup>4</sup>	300046529	1	1
NS	Fuse, Slo Nano SMF 0.2A, 600V, Midget, Time Delay	300044083	1	1
NS	Kit, Fuse 2A, 1000V, HVA, 3"	300045312	1	1
NS	Kit, Fuses, Softstart <sup>4</sup>	331877106	1	1
NS	Kit, Fuses, Softstart <sup>5</sup>	300046521	1	1
NS	Kit, Fuse Nano SMF 0.75A, 125V <sup>5</sup>	300046530	1	1
NS	Kit, IGV Motor Service	300048085	1	1
NS	Kit, Buss Bar Assy and Capacitors, 400V	300043831	1	
NS	Kit, Buss Bar Assy and Capacitors, 460V	300046429	1	
NS	Kit, Buss Bar Assy and Capacitors, 400V	300047251		1
NS	Kit, Buss Bar Assy and Capacitors, 460V	300043832		1
NS	Kit, Buss Bar Assembly and Capacitors, 575V	300049168	1	
NS	Kit, Buss Bar Diode	300048955	1	
NS	Kit, Buss Assy Conn Motor IGBT	300045215	1	
NS	Kit, Buss Assy Conn Motor IGBT	300048961		1
NS	Kit, Suction Strainer, Straight	300048957	1	
NS	Kit, Plunger Assy, Non-return Valve, Discharge 2"	300043734	1	
NS	Kit, Compressor Cooling Strainer	300046931	1	
NS	Kit, Compressor Mounting	300040125	1	1
NS	Kit, Screws for Covers, M5, Stainless Steel	300046932	1	1
NS	Bluetooth Serial Adapter Kit	300046950	1	1
NS	Dielectric Grease	300045661	1	1

<sup>4</sup> Used on Softstart Series 20 (Compressor Serial # 071975020) or before.

<sup>5</sup> Used on Softstart Series 21 (Compressor Serial # 071975030) or later.

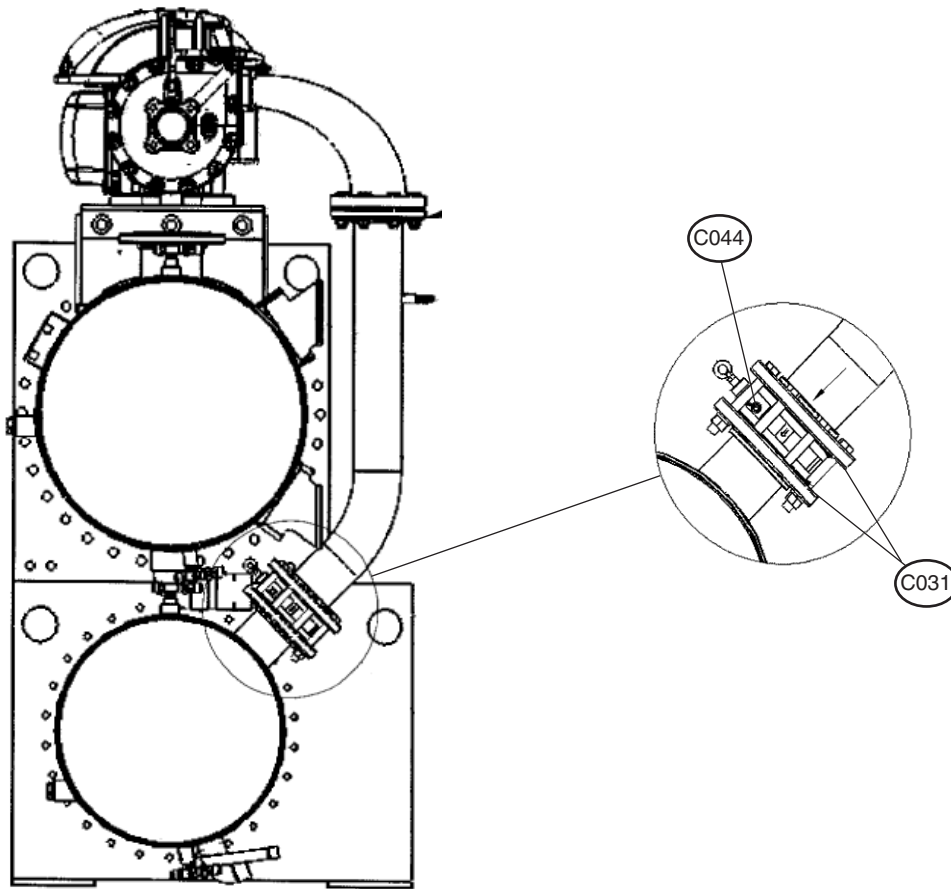
NS = Not Shown

# Magnetic Bearing Compressor

Ref. #	Description	Part Number	Quantity per compressor	
			145D 150D	145S 250D 290D
NS	Kit, Cooling Valves Assy	300043892	1	
NS	Kit, Cooling Valves Assy	300047112		1
NS	Kit, IGV Housing Assembly and O-Rings	300043626	1	
NS	Kit, IGV Housing Assy and O-Rings (black IGV cone)	300043627		1
NS	Kit, IGV Housing Assy and O-Rings (gold IGV cone)	300046822		1
NS	Kit, Bracket Mains Input Plate, 2.0" Diameter	300049170	1	1
NS	Kit, Bracket Mains Input Plate, 2.5" Diameter	300049171	1	1
NS	Kit, Bracket Mains Input Plate, 3.0" Diameter	300049172	1	1
NS	Kit, Bracket Mains Input Plate, 3.5" Diameter	300049173	1	1
NS	Kit, Heatsink Cooling Manifold SCR Assy	300049070	1	
NS	Kit, Heatsink Cooling Manifold SCR Assy	300049174		1
NS	Kit, Hermetic Feedthrough IGV - 4 Pin	300049176	1	1
NS	Kit, Hermetic Feedthru, Rear Bearing, 6-Pin	300043473	1	1
NS	Kit, Hermetic Feedthru, Front Bearing, 4-Pin	300046599	1	1
NS	Kit, Hermetic Feedthru, Bearing Sensor, 9-Pin	300045720	1	1
NS	Kit, Hermetic Feedthru High Power	300045214	1	1

NS = Not Shown

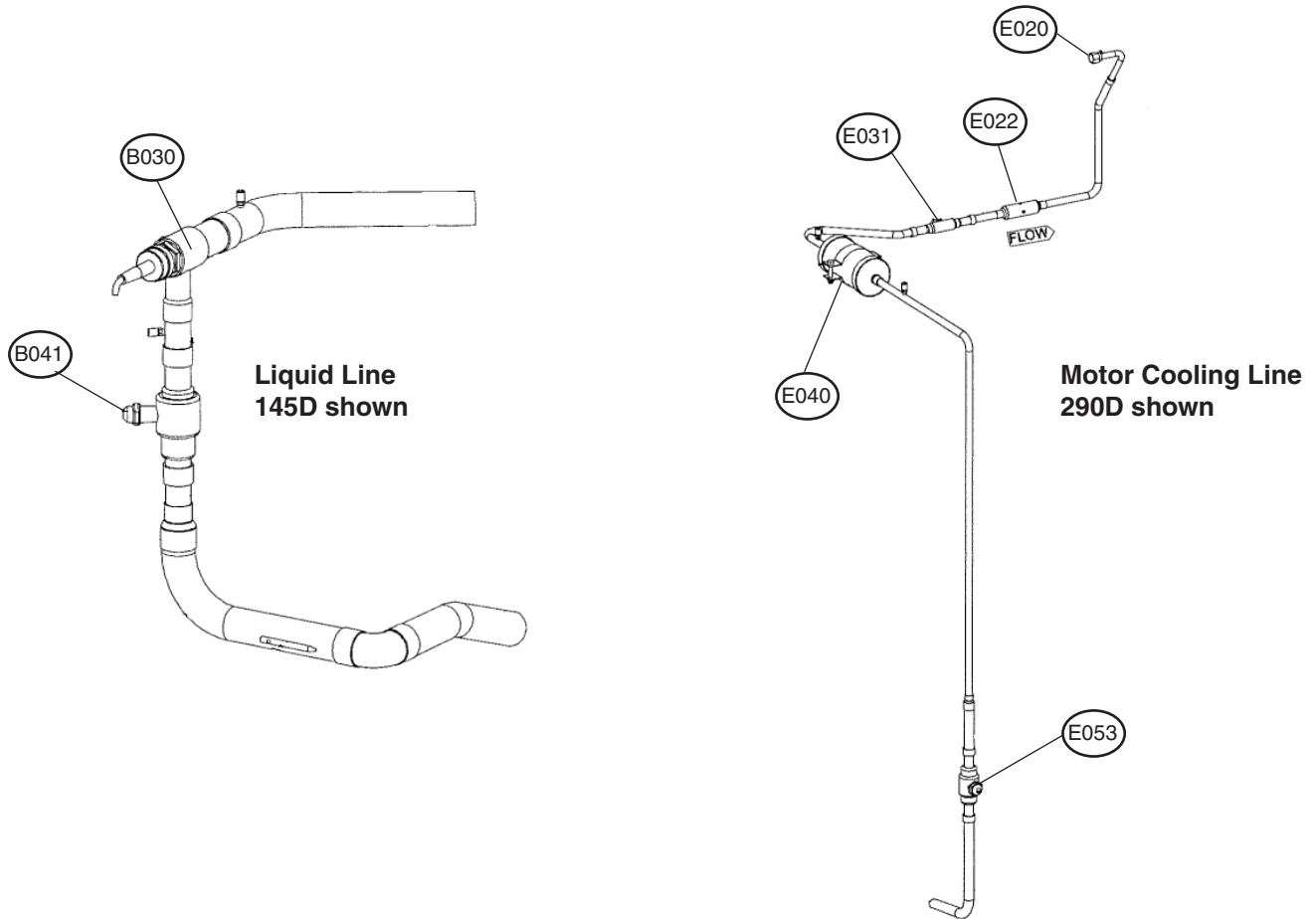
# Piping - Discharge



WMC290D shown

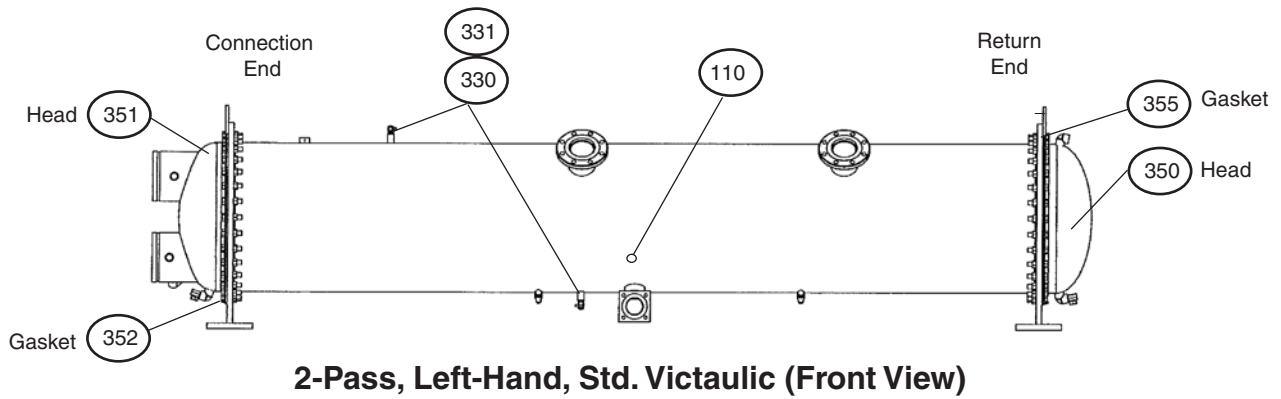
Ref. #	Description	Part Number	145S	145D	150D	250D	290D
C031	Gasket, 6.88 OD	070199120	2	6	6	6	6
C044	Check Valve	332630201	1	2	2	2	2

# Piping - Liquid Line and Motor Cooling



Ref. #	Description	Part Number	145S	145D	150D	250D	290D
B030	Electronic Expansion Valve, 225 Ton	330386201		1			
B030	Electronic Expansion Valve, 126 Ton	330386206	1		1		
B030	Electronic Expansion Valve, 250 Ton	330386207				1	1
B041	Ball Valve, 1.63	330286007	1	1			
B041	Ball Valve, 1.375	330286006			1		
B041	Ball Valve, 2.12	330286008				1	1
E020	Flare Nut .375	000108300		2	2		
E020	Flare Nut .500	000136100	1			2	2
E022	Strainer	735030506	1	2	2	2	2
E031	Ball Valve, .625	330286053	1				
E031	Ball Valve, .625	330286003		2	2	2	2
E040	Filter Drier, .625	735028827	1	2	2	2	2
E053	Ball Valve, .875	330286004	1	2	2	2	2

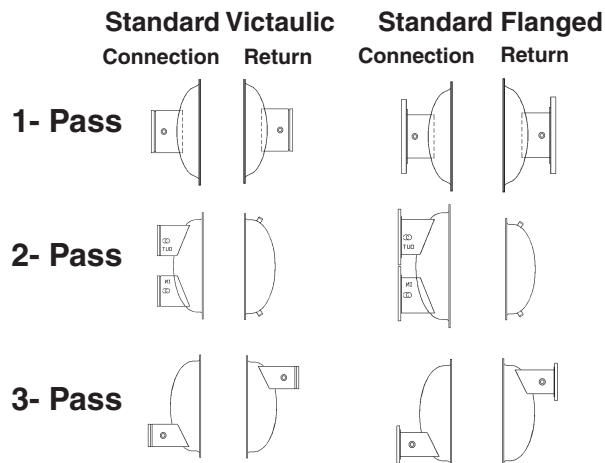
# Condenser- Standard Heads



Ref. #	Description	Part Number	Qty.
110	Sight Glass Clear w/Ball	350229501	1
330	Shut-Off Valve	735039929	2
331	Cap, Flare	073243901	2

<b>Code 18:</b>	<b><u>1</u></b>	<b><u>L</u></b>	<b><u>A</u></b>	<b><u>YYY</u></b>
	<b># Passes</b>	<b>Connection</b>	<b>Heads</b>	<b>Future Use</b>
	1=1 Pass	L= Left Hand	A= Std. Victaulic	
	2=2 Pass	R= Right Hand	B= Std. Flanged	
	3=3 Pass		C= Wtr. Bx. Vict.	
			D= Wtr. Bx. Flgd.	

## Head Types



# Condenser - Standard Heads 20 Inch

## 20 inch, 150 PSI Standard Heads, Victaulic - 1 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350 / 351	Assembly, Connection Head	331153101	2
352 / 355	Gasket, Connection Head	070304644	2
NS	Screw, H5, 0.50 x 2.5	735033851	22 per head
NS	Nut, 0.50-13	735029625	22 per head

NS = Not Shown

## 20 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332182702	1
351	Assembly, Connection Head		
	with Flanged Connection	332187903	1
	with Victaulic Connection	332186103	1
352	Gasket, Connection Head	071557803K	1
355	Gasket, Return Head	070304644	1
NS	Screw, H5, 0.50 x 2.5	735033851	22 per head
NS	Nut, 0.50-13	735029625	22 per head

NS = Not Shown

## 20 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 3 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350 / 351	Assembly, Connection Head		
	with Flanged Connection	331158304	2
	with Victaulic Connection	331156504	2
352 / 355	Gasket, Head	071557803K	2
NS	Screw- H5, 0.50 x 2.5	735033851	22 per head
NS	Nut- 0.50-13	735029625	22 per head

NS = Not Shown

# Condenser - Standard Heads 22 Inch

## 22 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332182902	1
351	Assembly, Connection Head		
	with Flanged Connection	332188103	1
	with Victaulic Connection	332186303	1
352	Gasket, Connection Head	071557804K	1
355	Gasket, Return Head	070304645	1
NS	Screw, H5, 0.50 x 2.5	735033851	26 per head
NS	Nut, 0.50-13	735029625	26 per head

NS = Not Shown

## 22 Inch, 300 PSI Standard Heads, Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332166542	1
351	Assembly, Connection Head	332171743	1
352	Gasket, Connection Head	071557814	1
355	Gasket, Return Head	070304614	1
NS	Screw- H5, 0.50 x 4.0	735033542	52 per head
NS	Nut- 0.50-13	735029629	52 per head

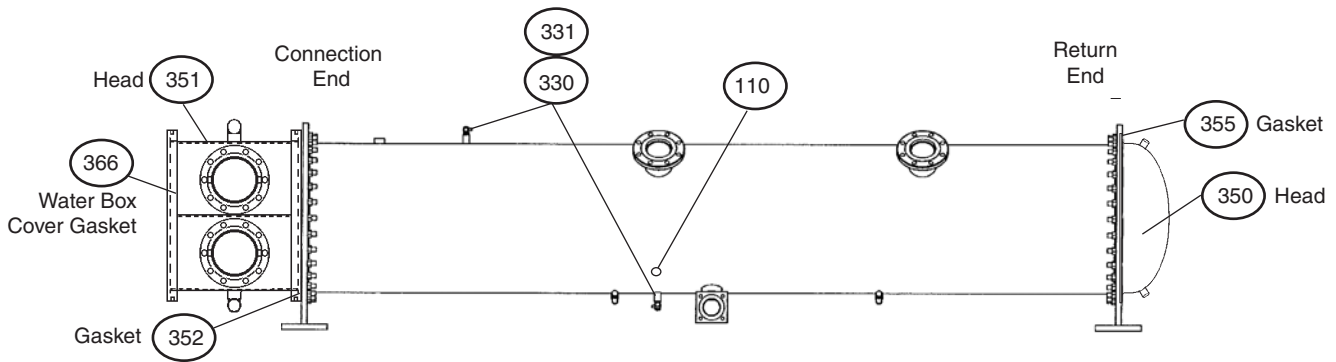
NS = Not Shown

## 22 inch, 150 PSI Standard Heads, Victaulic - 3 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350 / 351	Assembly, Connection Head	331156704	2
352 / 355	Gasket, Connection Head	071557804K	2
NS	Screw, H5, 0.50 x 2.5	735033851	26 per head
NS	Nut, 0.50-13	735029625	26 per head

NS = Not Shown

# Condenser- Water Box Heads

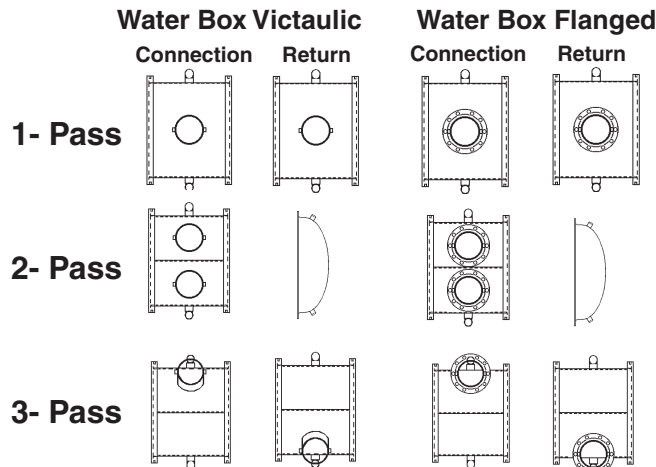


**2-Pass, Left-Hand, Water Box Victaulic (Front View)**

Ref. #	Description	Part Number	Qty.
110	Sight Glass Clear w/Ball	350229501	1
330	Shut-Off Valve	735039929	2
331	Cap. Flare	073243901	2

<b>Code 18:</b>	<b><u>1</u></b>	<b><u>L</u></b>	<b><u>A</u></b>	<b><u>YYY</u></b>
	<b># Passes</b>	<b>Connection</b>	<b>Heads</b>	<b>Future Use</b>
	1=1 Pass	L= Left Hand	A= Std. Victaulic	
	2=2 Pass	R= Right Hand	B= Std. Flanged	
	3=3 Pass		C= Wtr. Bx. Vict.	
			D= Wtr. Bx. Flgd.	

## Head Types



# Condenser- Water Box Heads 20 Inch

## 20 Inch, 150 PSI Water Box Heads, Victaulic and Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332182702	1
351	Assembly, Connection Head		
	with Flanged Connection	331158353	1
	with Victaulic Connection	331156553	1
352	Gasket, Connection Head	071557853	1
355	Gasket, Return Head	070304644	1
366	Gasket, Water Box Cover	333850004	1
NS	Screw- H5, 0.50 x 2.5, for Return Head	735033851	22 per head
NS	Screw- H5, 0.50 x 3.0, for Water Box	735033852	44 per head
NS	Nut- 0.50-13, for Return Head	735029625	22 per head
NS	Nut- 0.50-13, for Water Box Head	735029625	44 per head

NS = Not Shown

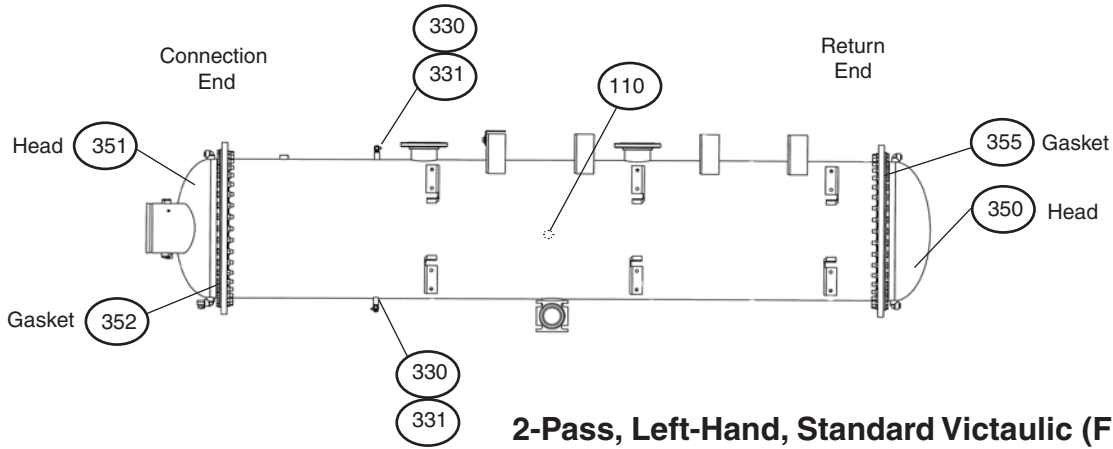
# Condenser- Water Box Heads 22 Inch

## 22 Inch, 150 PSI Water Box Heads, Victaulic and Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332182902	1
351	Assembly, Connection Head		
	with Flanged Connection	332186353	1
	with Victaulic Connection	332188153	1
352	Gasket, Connection Head	071557854	1
355	Gasket, Return Head	070304645	1
366	Gasket, Water Box Cover	333850005	1
NS	Screw- H5, 0.50 x 2.5, for Return Head	735033851	26 per head
NS	Screw- H5, 0.50 x 3.5, for Water Box	735033941	52 per head
NS	Nut- 0.50-13, for Return Head	735029625	26 per head
NS	Nut- 0.50-13, for Water Box Head	735029625	52 per head

NS = Not Shown

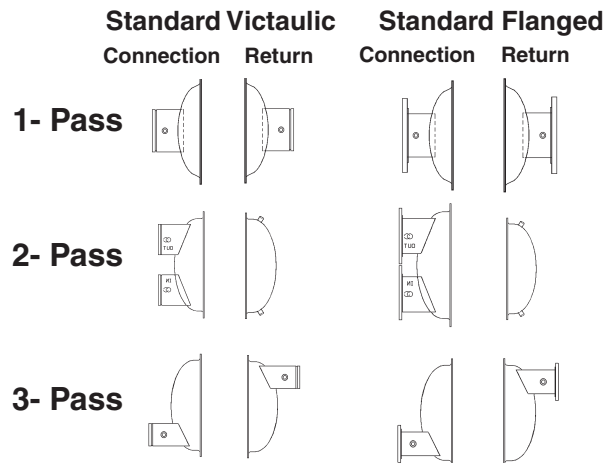
# Evaporator- Standard Heads



Ref. #	Description	Part Number	Qty.
110	Sight Glass Clear w/Ball	350229501	1
330	Shut-Off Valve	735039929	2
331	Cap. Flare	073243901	2

<b>Code 10:</b>	<b>1</b>	<b>L</b>	<b>A</b>
	<b># Passes</b>	<b>Connection</b>	<b>Heads</b>
	1=1 Pass	L= Left Hand	A= Std. Victaulic
	2=2 Pass	R= Right Hand	B= Std. Flanged
	3=3 Pass		C= Wtr. Bx. Vict. D= Wtr. Bx. Flgd.

## Head Types



# Evaporator - Standard Heads 22 Inch

## 22 Inch, 150 PSI Standard Heads, Victaulic - 1 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350 / 351	Assembly, Connection Head	331153301	2
352 / 355	Gasket, Return Head	070304645	2
NS	Screw, H5, 0.50 x 2.5	735033851	26 per head
NS	Nut, 0.50-13	735029625	26 per head

NS = Not Shown

## 22 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332182902	1
351	Assembly, Connection Head		
	Flanged Connection	332184503	1
	Victaulic Connection	332182903	1
352	Gasket, Connection Head	071557804K	1
355	Gasket, Return Head	070304645	1
NS	Screw, H5, 0.50 x 2.5	735033851	26 per head
NS	Nut, 0.50-13	735029625	26 per head

NS = Not Shown

## 22 Inch, 150 PSI Standard Heads, Victaulic - 3 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350/351	Assembly, Head, Connection	331153304	2
352/355	Gasket, Head	071557804K	2
NS	Screw- H5, 0.50 x 2.5	735033851	26 per head
NS	Nut- 0.50-13	735029625	26 per head

NS = Not Shown

# Evaporator - Standard Heads 26 Inch

## 26 Inch, 150 PSI Standard Heads, Victaulic - 1 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350 / 351	Assembly, Connection Head	331153501	2
352 / 355	Gasket, Return Head	070304646	2
NS	Screw, H5, 0.75 x 3.0	735033878	32 per head
NS	Nut, 0.75-10	735029626	32 per head

NS = Not Shown

## 26 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332183102	1
351	Assembly, Connection Head		
	Flanged Connection	332184703	1
	Victaulic Connection	332183103	1
352	Gasket, Connection Head	071557805K	1
355	Gasket, Return Head	070304646	1
NS	Screw, H5, 0.75 x 3.0	735033878	32 per head
NS	Nut, 0.75-10	735029626	32 per head

NS = Not Shown

## 26 Inch, 300 PSI Standard Heads, Victaulic and Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332166742	1
351	Assembly, Connection Head		
	Flanged Connection	332168343	1
	Victaulic Connection	332166743	1
352	Gasket, Connection Head	071557815	1
355	Gasket, Return Head	070304615	1
NS	Screw, H8, 0.75 x 5.5	735033571	64 per head
NS	Nut, 0.75-10	735029628	64 per head

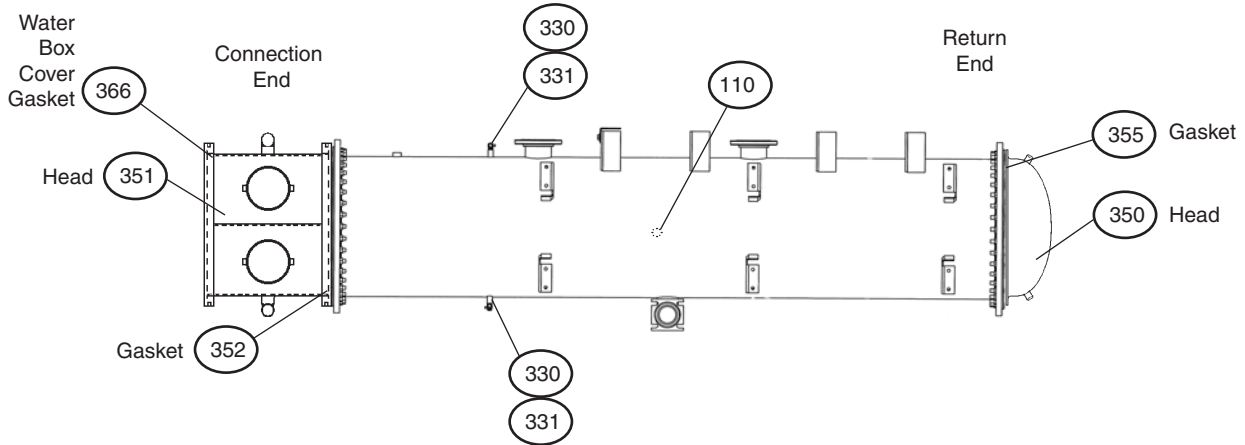
NS = Not Shown

## 26 Inch, 150 PSI Standard Heads, Victaulic and Flanged - 3 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350/351	Assembly, Head, Connection		
	with Flanged Connection	331155104	1
	with Victaulic Connection	331153504	1
352/355	Gasket, Head	071557805K	2
NS	Screw- H5, 0.75 x 3.0	735033878	32 per head
NS	Nut- 0.75-10	735029626	32 per head

NS = Not Shown

# Evaporator- Water Box Heads

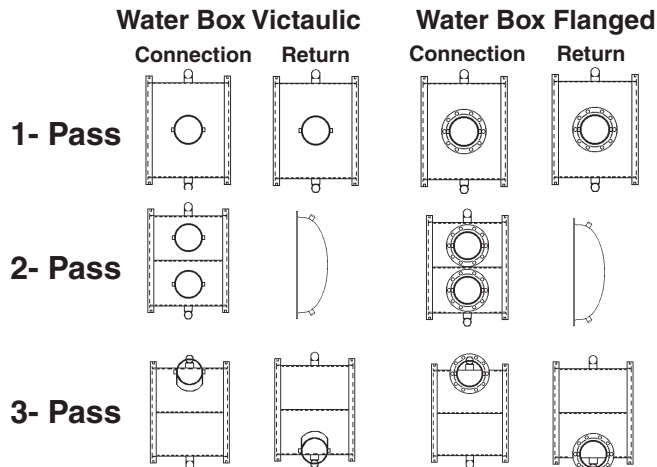


**2-Pass, Left-Hand, Water Box Victaulic (Front View)**

Ref. #	Description	Part Number	Qty.
110	Sight Glass Clear w/Ball	350229501	1
330	Shut-Off Valve	735039929	2
331	Cap. Flare	073243901	2

<b>Code 10:</b>	<b>1</b>	<b>L</b>	<b>A</b>
	<b># Passes</b>	<b>Connection</b>	<b>Heads</b>
	1=1 Pass	L= Left Hand	A= Std. Victaulic
	2=2 Pass	R= Right Hand	B= Std. Flanged
	3=3 Pass		C= Wtr. Bx. Vict.
			D= Wtr. Bx. Flgd.

## Head Types



# Evaporator- Water Box Heads 22 Inch

## 22 Inch, 150 PSI Water Box Heads, Victaulic and Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332182902	1
351	Assembly, Connection Head		
	Flanged Connection	331154953	1
	Victaulic Connection	331153353	1
352	Gasket, Connection Head	350296754	1
355	Gasket, Return Head	070304645	1
366	Gasket Water Box Cover	333850005	1
NS	Screw, H5, 0.50 x 2.5, for Return Head	735033851	26 per head
NS	Screw, H5, 0.50 x 3.5, for Water Box	735033941	52 per head
NS	Nut, 0.50-13, for Return Head	735029625	26 per head
NS	Nut, 0.50-13 for Water Box Head	735029625	52 per head

NS = Not Shown

## 22 Inch, 150 PSI Standard Heads, Flanged - 3 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350/351	Assembly, Head, Connection	331154954	2
352/355	Gasket, Head	350296754	2
366	Gasket, Water Box Cover	071557804K	2
NS	Screw- H5, 0.50 x 3.5	735033941	52 per head
NS	Nut- 0.50-13	735029625	52 per head

NS = Not Shown

# Evaporator- Water Box Heads 26 Inch

## 26 Inch, 150 PSI Water Box Heads, Victaulic and Flanged - 2 Pass, non-ASME

Ref. #	Description	Part Number	Qty.
350	Assembly, Return Head	332183102	1
351	Assembly, Connection Head		
	Flanged Connection	332184753	1
	Victaulic Connection	332183153	1
352	Gasket, Connection Head	350296755	1
355	Gasket, Return Head	070304646	1
366	Gasket Water Box Cover	333850006	1
NS	Screw, H5, 0.75 x 3.0, for Return Head	735033878	32 per head
NS	Screw, H5, 0.75 x 4.5, for Water Box	735033969	64 per head
NS	Nut, 0.75-10, for Return Head	735029626	32 per head
NS	Nut, 0.75-10, for Water Box Head	735029626	64 per head

NS = Not Shown

# Evaporator Insulation

Description	Part Number	Quantity
22 inch, 9 ft. Evaporator:		
Insulation, 3/4", Evaporator Shell	047662050	68 square ft *
Insulation, 3/4", Evaporator Head	047662050	9 square ft per head
Insulation, 3/4", Suction	047662050	11 square ft per suction line
22 inch, 12 ft. Evaporator:		
Insulation, 3/4", Evaporator Shell	047662050	90 square ft *
Insulation, 3/4", Evaporator Head	047662050	9 square ft per head
Insulation, 3/4", Suction	047662050	11 square ft per suction line
26 inch, 9 ft. Evaporator:		
Insulation, 3/4", Evaporator Shell	047662050	77 square ft *
Insulation, 3/4", Evaporator Head	047662050	11 square ft per head
Insulation, 3/4", Suction	047662050	11 square ft per suction line
26 inch, 12 ft. Evaporator:		
Insulation, 3/4", Evaporator Shell	047662050	103 square ft *
Insulation, 3/4", Evaporator Head	047662050	11 square ft per head
Insulation, 3/4", Suction	047662050	11 square ft per suction line

\* If Code 32 = 3\*, double the quantity for this item.

# Unit Controls Operator Interface Panel



Power Panel

15 16

Unit Control Box

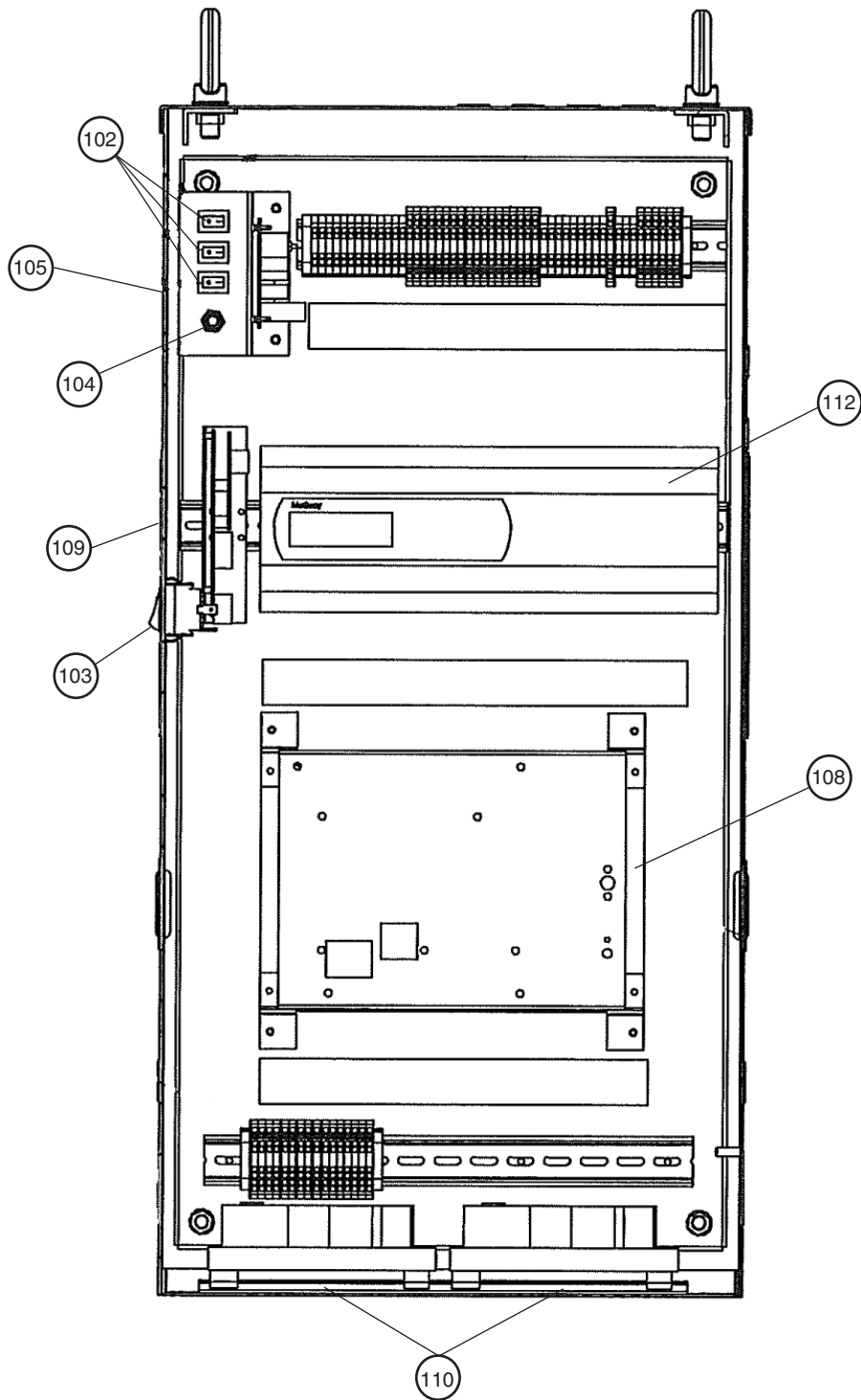
Configuration shown for 12-foot Evaporator/Condenser stack.

(9-foot stack has Power Panel and Unit Control Box/Touchscreen in opposite locations.)

Ref. No.	Description	Part Number	Qty.
15	Operator Interface Panel w/cables, 12" Beige	330277501	1
15	Operator Interface Panel w/cables, 15" Beige	330276501	1
15	Operator Interface Panel w/cables, 15" Black	330276502	1
	Cable, Power, Operator Interface	300040768	1
	Cable, Serial, Operator Interface	300043345	1
	Cable Kit (includes Power, Serial & VGA cords)	300043289	1
16	Support Arm Assy, Beige (includes swivel pin, washers, & nut)	330815401	1
16	Support Arm Assy, Black (includes swivel pin, washers, & nut)	330815411	1

# Unit Controls

## Unit Control Box Diagram

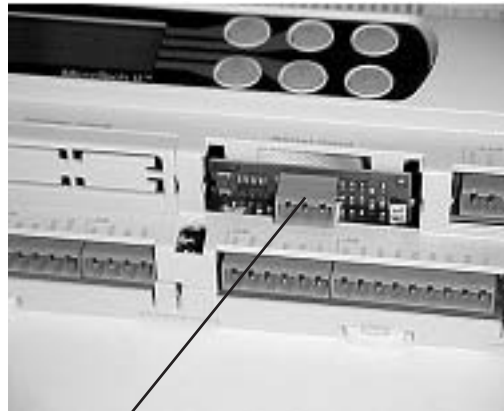


# Unit Controls

## Unit Control Box

Ref. #	Schem.	Description	Part Number	Qty.
102	SW1	Rocker Switch, Unit	300042181	1
102	SW6, SW7	Rocker Switch, Compressor	300042181	2
103	SW10	Rocker Switch, Emergency Shut-down	300042962	1
104	CB	Circuit Breaker, 10A, 250V	300042182	1
105	EXV	EXV Driver Board	330277803	1
108	PC	OITS Circuit Board Assy	330276603	1
		Power Supply for Ckt Brd - OITS	330277353	1
		Power Supply for ATX	333355201	1
		Memory Module	330276693	1
109	UCM	Comm Module Card	330275202	1
110	MOD1, MOD2	PCB Assy	300042958	2
112	UC	Unit Controller, MTII	332608311	1
		Serial Card for Unit Controller	300047238	1
NS	US05	Sensor- 30 ft.	073007303	1
NS	US02, US03, US04	Sensor- 30 ft.	073007203	3
NS	US10	Sensor- 30 ft.	073007203	1

NS = Not Shown

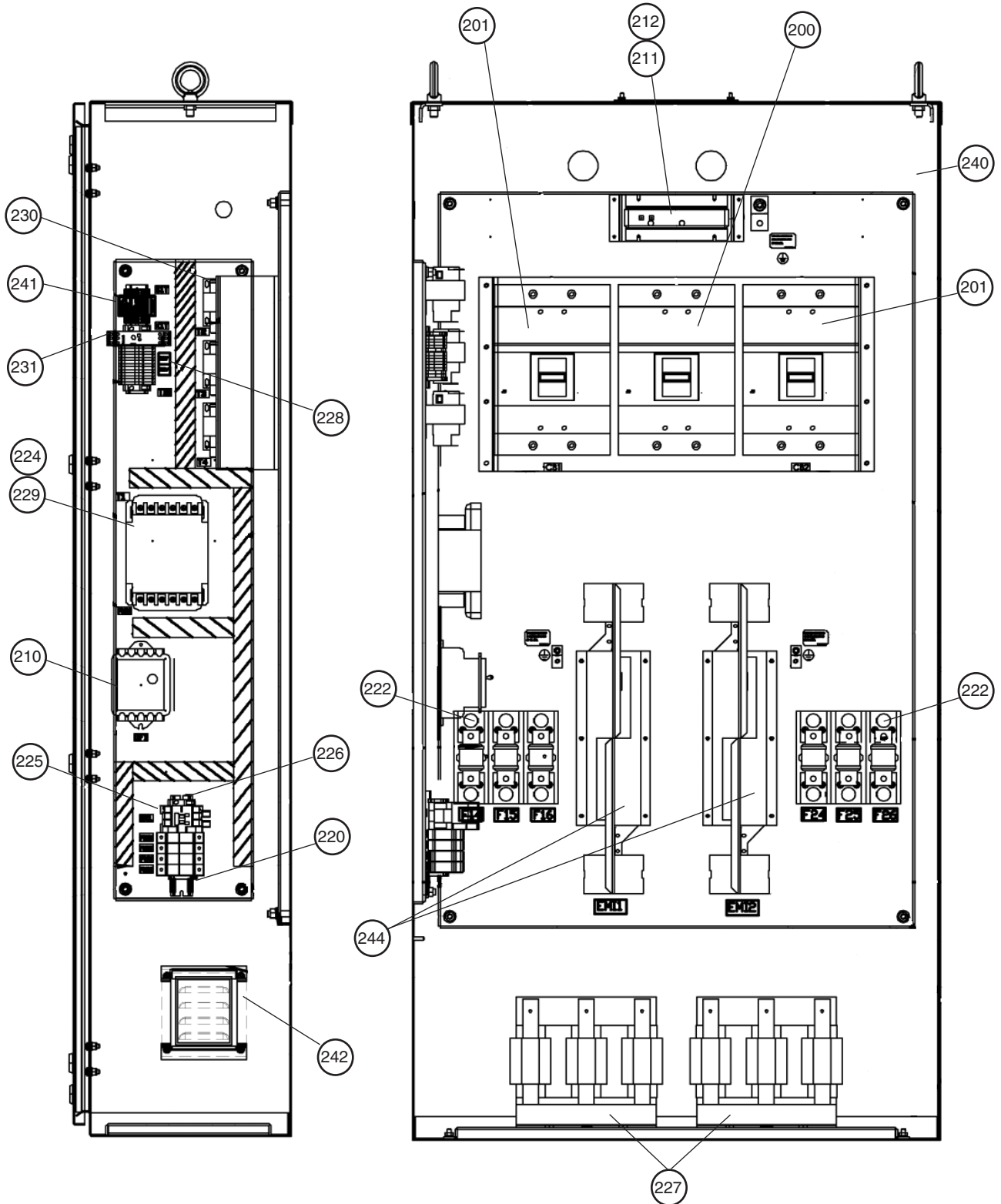


400

Ref. #	Description	Part Number	Qty.
400	LonMark Serial Interface	332608501	1
400	ModBus RS485 Serial Network Board	332608801	1
400	RS232 Serial Gateway / Modem Board	332608701	1
400	BACnet with IP Ethernet	350147406	1
NS	BACnet with RS485 & Ethernet	350147407	1

NS = Not Shown

# Unit Controls Power Panel Diagrams



## Unit Controls Power Panel - Unit Size 145S

Ref. #	Schem.	Description	Part Number	Quantity
<b>Standard Short Circuit Current Rating (Code 29, Digit 6 = Y)</b>				
200	CB1	Operating Mechanism, Circuit Breaker	300042117	1
		Trip, 150A, Circuit Breaker, Std. SCCR *	300042207	1
		Trip, 200A, Circuit Breaker, Std. SCCR *	300047417	1
		Trip, 225A, Circuit Breaker, Std. SCCR *	300046537	1
		Trip, 250A, Circuit Breaker, Std. SCCR *	300042208	1
		Frame, Circuit Breaker	300042120	1
		Handle, Circuit Breaker	300040313	1
		Shaft	300042115	1
		Lug, Circuit Breaker	300040792	3
<b>High Short Circuit Current Rating (Code 29, Digit 6 = H)</b>				
200	CB1	Kit, Circuit Breaker, High SCCR	300047423	1
		(includes frame, trip, lugs)		
		Operating Mechanism, Circuit Breaker	300042118	1
		Handle, Circuit Breaker	300040313	1
		Shaft	300042115	1
210	GDF1	Ground Fault Relay (option)	330315101	1
211	GDF1	Ground Fault Sensor (option)	300043558	1
212	GDF1	Ground Fault Bracket (option)	300043559	1

\* If unable to identify from this information, contact McQuay Parts with the Control Box Serial No. and Control Box Part No.  
NS = Not Shown

## Unit Controls Power Panel - Unit Size 145S

Ref. #	Schematic	Description	Part Number	Qty. per panel
220	F11,12	Fuse, 4A	300046330	2
		Fuse Block for 4A Fuse	300047236	2
222	F14, 15	Fuse, 175A, 600V	300045697	2
		Fuse Block for 175A Fuse	300047230	2
	F14, 15	Fuse, 250A, 600V	300047224	2
		Fuse Block for 250A Fuse	300047222	2
224	F13	Fuse, 8A Midget	300047232	1
	F13	Fuse Puller/Cover	300043152	1
227	LR1	Line Reactor, 124A *	300047441	1
	LR1	Line Reactor, 156A *	300045391	1
	LR1	Line Reactor, 180A *	300045338	1
228	R2V	Surge Protector	300047548	1
229	T1	Transformer Kit, 750VA, 400V:120V	300047233	1
	T1	Transformer Kit, 750VA, 480V:120V	300047231	1
230	T2,3,4	Transformer, 120V - 24V (400V unit)	330720902	3
	T2,3,4	Transformer, 120V - 24V (460V unit)	300042178	3
231	K1T	Timer	300047547	1
244	EMI1	Optional EMI Filter (Code 29, Digit 3 = P)	300047225	1
NS		Ground Lug	300047435	1
NS		Motor Lug *	300043702	1
NS		Motor Lug *	300047237	1

\* If unable to identify from this information, contact McQuay Parts with the Control Box Serial No. and Control Box Part No.  
NS = Not Shown

# Unit Controls

## Power Panel - Unit Sizes 145D & 150D

### Single Point Connection (Code 29, Digit 1 = S)

Ref. #	Schematic	Description	Part Number	Qty.
<b>Standard Short Circuit Current Rating (Code 29, Digit 6 = Y)</b>				
200	DISC	250A Disconnect Switch, Std. SCCR *	300042104	1
	DISC	250A Operating Mechanism *	300042117	1
200	DISC	400A Disconnect Switch, Std. SCCR *	300042106	1
	DISC	400A Operating Mechanism *	300042118	1
		Operating Shaft	300042115	1
		Handle	300040313	1
200	PB10	Power Block, 760A	300047218	1
201	CB1, CB2	Trip, 100A, Circuit Breaker, Std. SCCR *	300047220	2
	CB1, CB2	Trip, 125A, Circuit Breaker, Std. SCCR *	300042941	2
	CB1, CB2	Trip, 150A, Circuit Breaker, Std. SCCR *	300042207	2
	CB1, CB2	Trip, 200A, Circuit Breaker, Std. SCCR *	300047417	2
		Frame, Circuit Breaker	300042120	2
		Lug, Circuit Breaker	300040792	6
		Padlock for Circuit Breaker	300047418	2
<b>High Short Circuit Current Rating (Code 29, Digit 6 = H)</b>				
200	CB	200A Circuit Breaker, High SCCR (145D)	300047428	1
	CB	250A Circuit Breaker, High SCCR (150D)	300046301	1
		Operating Shaft	300042115	1
		Operating Mechanism	300042117	1
		Handle	300040313	1
201	CB1, CB2	Kit, Circuit Breaker (includes frame, trip, lugs)		
		100A Circuit Breaker, High SCCR (145D)	300047419	2
		125A Circuit Breaker, High SCCR (150D)	300047420	2
		Padlock for Circuit Breaker	300047418	2
210	GDF1	Ground Fault Relay (option)	330315101	1
211	GDF1	Ground Fault Sensor (option)	300043558	1
212	GDF1	Ground Fault Bracket (option)	300043559	1

\* If unable to identify from this information, contact McQuay Parts with the Control Box Serial No. and Control Box Part No.

# Unit Controls

## Power Panel - Unit Sizes 145D & 150D

### Multi-Point Connection (Code 29, Digit 1 = M)

Ref. #	Schematic	Description	Part Number	Qty.
200	CB1, 2	Operator, Circuit Breaker	300042117	2
		Trip, 100A, Circuit Breaker, Std. SCCR *	300047220	2
		Trip, 125A, Circuit Breaker, Std. SCCR *	300042941	2
		Trip, 150A, Circuit Breaker, Std. SCCR *	300042207	2
		Frame, Circuit Breaker	300042120	2
		Handle, Circuit Breaker	300040313	2
		Shaft	300042115	2
		Lug, Circuit Breaker	300040792	6
210	GDF1	Ground Fault Relay (option)	330315101	2
211	GDF1	Ground Fault Sensor (option)	300043558	2
212	GDF1	Ground Fault Bracket (option)	300043559	2

\* If unable to identify from this information, contact McQuay Parts with the Control Box Serial No. and Control Box Part No.

# Unit Controls

## Power Panel - Unit Sizes 145D & 150D

Ref. #	Schematic	Description	Part Number	Qty. per panel
220	F11,12,21,22	Fuse, 4A (400V & 460V units)	300046330	4
		Fuse, 3A (575V units)	300047433	4
		Fuse Block	300047236	4
224	F13	Fuse, 8A Midget	300047232	1
224	F13	Fuse Puller/Cover	300043152	1
225	IR1	Relay (400V & 460V units)	300047443	1
		Relay (575V units)	300047444	1
226		Contact for IR1 Relay	300043778	1
227	LR1, 2	Line Reactor, 96A *	300047440	2
		Line Reactor, 99A *	300047442	2
		Line Reactor, 125A *	300047439	2
		Line Reactor, 156A *	300045391	2
228	R2V/R3V	Surge Protector	300047548	2
229	T1	Transformer Kit, 750VA, 400V:120V	300047233	1
		Transformer Kit, 750VA, 460V:120V	300047231	1
		Transformer Kit, 750VA, 575V:120V	300047436	1
230	T2,3,4	Transformer, 120V - 24V (400V units)	330720902	3
		Transformer, 120V - 24V (460 & 575V units)	300042178	3
231	K1T	Timer	300047547	1
244	EMI1, EMI2	Optional EMI Filter (400V & 460V)	300042960	2
		Optional EMI Filter, 180A (575V)	300047438	2
NS		Ground Lug	300047435	2
NS		Motor Lug	300043702	2

\* If unable to identify from this information, contact McQuay Parts with the Control Box Serial No. and Control Box Part No.  
NS = Not Shown

# Unit Controls

## Power Panel - Unit Sizes 250D & 290D

**Single Point Connection** (Code 29, Digit 1 = S)

Ref. #	Schematic	Description	Part Number	Qty.
<b>Standard Short Circuit Current Rating</b> (Code 29, Digit 6 = Y)				
200	DISC	250A Disconnect Switch, Std. SCCR	300042104	1
		250A Operating Mechanism	300042117	1
200	DISC	400A Disconnect Switch, Std. SCCR	300042106	1
		400A Operating Mechanism	300042118	1
		Operating Shaft	300042115	1
		Handle	300040313	1
200	PB10	Power Block, 760A	300047218	1
201	CB1, CB2	Trip, 150A, Circuit Breaker, Std. SCCR *	300042207	2
		Trip, 200A, Circuit Breaker, Std. SCCR *	300047417	2
		Trip, 225A, Circuit Breaker, Std. SCCR *	300046537	2
		Trip, 250A, Circuit Breaker, Std. SCCR *	300042208	2
		Frame, Circuit Breaker	300042120	2
		Lug, Circuit Breaker	300040792	6
		Padlock for Circuit Breaker	300047418	2
<b>High Short Circuit Current Rating</b> (Code 29, Digit 6 = H)				
200	CB	300A Circuit Breaker, High SCCR *	300047425	1
		400A Circuit Breaker, High SCCR *	300047426	1
		450A Circuit Breaker, High SCCR *	300047427	1
		Operating Shaft	300042115	1
		Operating Mechanism	300042117	1
		Handle	300040313	1
201	CB1, CB2	Kit, Circuit Breaker (includes frame, trip, lugs)		
		150A Circuit Breaker, High SCCR *	300045320	2
		200A Circuit Breaker, High SCCR *	300047422	2
		225A Circuit Breaker, High SCCR *	300047423	2
		Padlock for Circuit Breaker	300047418	2
210	GDF1	Ground Fault Relay (option)	330315101	1
211	GDF1	Ground Fault Sensor (option)	300043558	1
212	GDF1	Ground Fault Bracket (option)	300043559	1

\* If unable to identify from this information, contact McQuay Parts with the Control Box Serial No. and Control Box Part No.

## Unit Controls Power Panel - Unit Sizes 250D & 290D

### Multi-Point Connection (Code 29, Digit 1 = M)

Ref. #	Schematic	Description	Part Number	Qty.
200	CB1, 2	Operator, Circuit Breaker	300042117	2
		Trip, 150A, Circuit Breaker, Std. SCCR *	300042207	2
		Trip, 200A, Circuit Breaker, Std. SCCR *	300047417	2
		Trip, 225A, Circuit Breaker, Std. SCCR *	300046537	2
		Frame, Circuit Breaker	300042120	2
		Handle, Circuit Breaker	300040313	2
		Shaft	300042115	2
		Lug, Circuit Breaker	300040792	6
210	GDF1	Ground Fault Relay	330315101	2
211	GDF1	Ground Fault Sensor	300043558	2
212	GDF1	Ground Fault Bracket	300043559	2

\* If unable to identify from this information, contact McQuay Parts with the Control Box Serial No. and Control Box Part No.

## Unit Controls

### Power Panel - Unit Sizes 250D & 290D

Ref. #	Schematic	Description	Part Number	Qty. per panel
220	F11,12,21,22	Fuse, 4A	300046330	4
		Fuse Block for 4A Fuse	300047236	4
222	F14, 15, 24, 25	Fuse, 175A, 600V *	300045697	4
		Fuse Block for 175A Fuse *	300047230	4
		Fuse, 250A, 600V *	300047224	4
		Fuse Block for 250A Fuse *	300047222	4
224	F13	Fuse, 8A Midget	300047232	1
224	F13	Fuse Puller/Cover	300043152	1
225	IR1	Relay for 460V/60Hz	300047443	1
226		Contact for IR1 Relay	300043778	1
227	LR1, 2	Line Reactor, 124A *	300047441	2
		Line Reactor, 156A *	300045391	2
		Line Reactor, 180A *	300045338	2
228	R2V/R3V	Surge Protector	300047548	2
229	T1	Transformer Kit, 750VA, 400V:120V	300047233	1
		Transformer Kit, 750VA, 480V:120V	300047231	1
230	T2,3,4	Transformer, 120V - 24V (400V units)	330720902	3
		Transformer, 120V - 24V (460V units)	300042178	3
231	K1T	Timer	300047547	1
240	M1	Exhaust Fan	300045228	1
241	S1T	Exhaust Fan Thermostat	300043007	1
242	VENT	Exhaust Fan Filter, Metal Mesh	300045253	1
244	EMI1, EMI2	Optional EMI Filter (250D)	300047225	2
		Optional EMI Filter (290D)	300042960	2
NS		Ground Lug	300047435	2
NS		Motor Lug *	300043702	2
NS		Motor Lug *	300047237	2


\* If unable to identify from this information, contact McQuay Parts with the Control Box Serial No. and Control Box Part No.  
NS = Not Shown

# Unit Controls Control Box Label

For all other control components, please contact McQuay Parts with the **Control Box Serial Number** and **Control Box Part Number**. These numbers are located on the Control box rating label (see example below). This label is found inside the panel.

**Control Box Serial Number**  
“S” + Year + ##### + detail#

**Control Box Part Number**



**BENSHAW**  
ADVANCED CONTROLS & DRIVES

Serial: S200600100-7 -1  
McQuay P.O.: 606257  
McQuay Part No.: 790993010B1R01  
Box-Elec: K25\_ACZ\_016A\_S\_C\_FAN\_208\_SDS\_SSC\_N\_N\_N  
McQuay Ref. No.: 330620152  
Benshaw Part No.: M183AGZ330620152

VOLTS	FLA	FREQ	PHASE	NEMA TYPE	UL TYPE
208	60	50/60	3	3R	1

“Industrial Control Panel for Air Conditioning Equipment”