
REPLACEMENT PARTS MANUAL

FREE COOLING UNIT SYSTEM

NOTICE
Document contains
Sticky Notes - Open with
Acrobat Reader DC
or later.

AIR CONDITIONER MODELS

W48A2PQ W48L2PQ
W60A2PQ W60L2PQ
W72A2PQ W72L2PQ

CONTROLLER MODEL

LC5000-100

Contents

Description	Page
Cabinet Components – Right Hand	
♦ Exploded View	2
♦ Usage List	3
Cabinet Components – Left Hand	
♦ Exploded View	4
♦ Usage List	5
Functional Components	
♦ Exploded View	6
♦ Usage List	7
Control Panel – Right Hand	
♦ Layout View	8
♦ Usage List	9
Control Panel – Left Hand	
♦ Layout View	10
♦ Usage List	11
Blower Assembly	
♦ Exploded View	12
♦ Usage List	12
Freecooling Components	
♦ Exploded View	13
♦ Usage List	13

Description	Page
Freecooling Air Hood	
♦ Exploded View	14
♦ Usage List	14
Freecooling Damper Motor	
♦ Exploded View	15
♦ Usage List	15
Bard-Link™ PLC Lead/Lag Controller	
♦ Exploded View	16
♦ Usage List	17

General Notes

- Revised and/or additional pages may be issued from time to time.
- A complete and current manual consists of pages shown in the following contents section.

Important

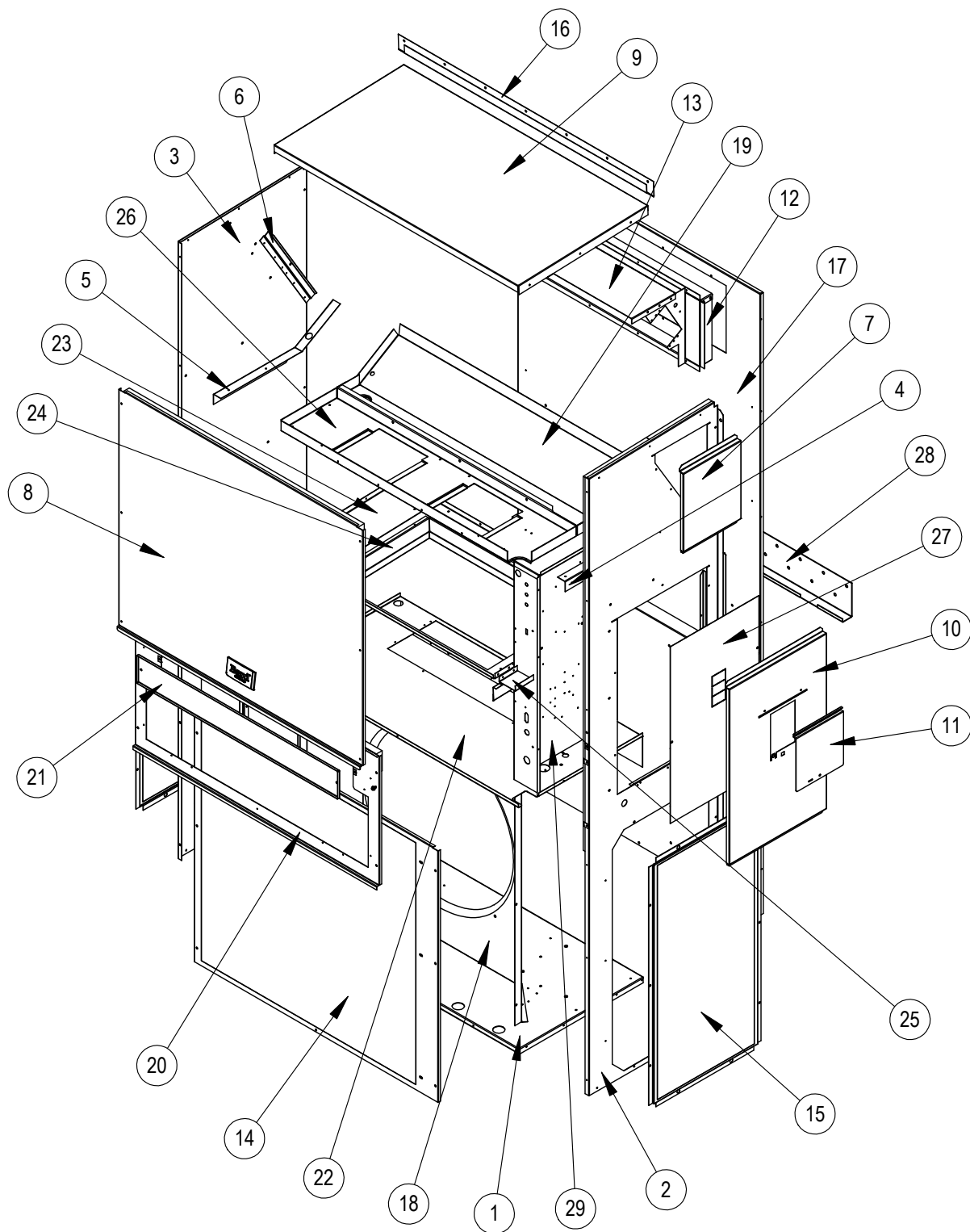
- Contact the installing and/or local Bard distributor for all parts requirements. Make sure to have the complete model and serial number available from the unit rating plates.



Bard Manufacturing Company, Inc.
Bryan, Ohio 43506
www.bardhvac.com

Manual: 2110-1429
Supersedes: **NEW**
Date: 9-29-15

CABINET COMPONENTS – Right Hand



SEXP-713

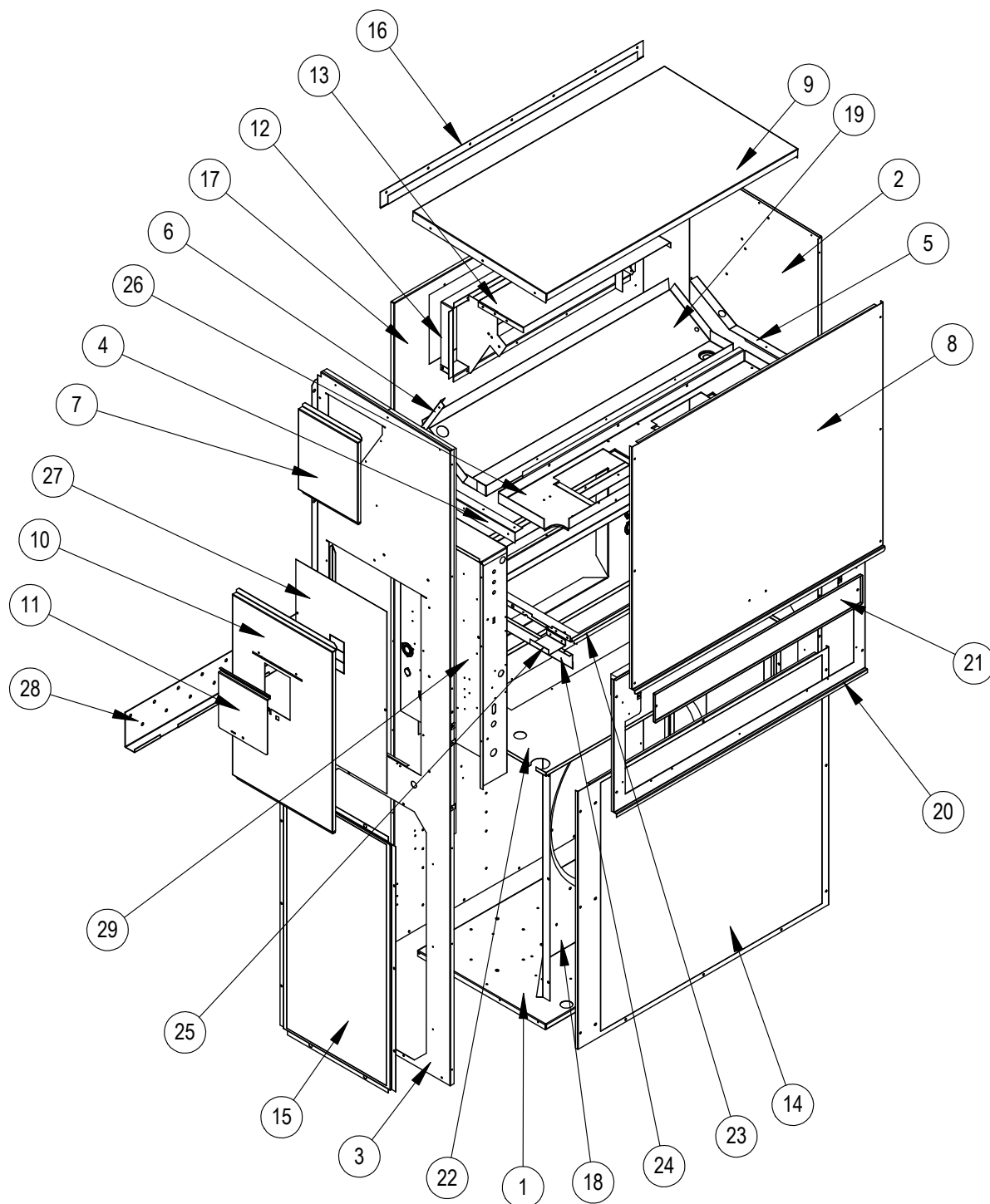
CABINET COMPONENTS – Right Hand

Dwg. No.	Part Number	Description	W48A2PQ	W60A2PQ	W72A2PQ
1	S127-481	Base	X	X	X
2	S501-889-* ①	Right Side	X	X	X
3	S501-922-* ①	Left Side	X	X	X
4	105X878	Support Angle	X	X	X
5	105X877	Support Angle	X	X	X
6	147-046	Evap. Angle	X	X	X
7	543-172-* ①	Heater Access Cover	X	X	X
8	S515-246-* ①	Upper Front	X	X	X
9	507-307-* ①	Top	X	X	X
10	S533-256-* ①	Control Panel Cover	X	X	X
11	S153-218-* ①	Disconnect Access Door	X	X	X
12	S111X034	Outlet Airframe Assembly	X	X	X
13	135-129	Heat Shield	X	X	X
14	118-085-* ①	Condenser Grille	X	X	X
15	118-086-* ①	Side Grille	2	2	2
16	113-150-* ①	Rain Flashing	X	X	X
17	509-251	Back	X	X	X
18	125-070	Fan Shroud	X	X	X
19	523-144	Drain Pan Assembly	X	X	X
20	553-600-* ①	Hood Mounting Door	X	X	X
21	553-641	Filter Door	X	X	X
22	521X517	Condenser Partition	X	X	X
23	131X164	Filter Tray	X	X	X
24	131-165	Filter Tray Angle	X	X	X
25	137-209	Fill Plate	X	X	X
26	120-463	Blower Partition	X	X	X
27	S132-281	Inner Control Panel Cover	X	X	X
28	113-140	Bottom Support Bracket	X	X	X
29	Control Panel Assembly	See Control Panel Assembly Drawing & Parts List	X	X	X

① Exterior cabinet parts are manufactured with various paint color options. To ensure the proper paint color is received, reference the following codes:

Beige	-X	Buckeye Gray	-4
White	-1		

CABINET COMPONENTS - Left Hand



SEXP-714

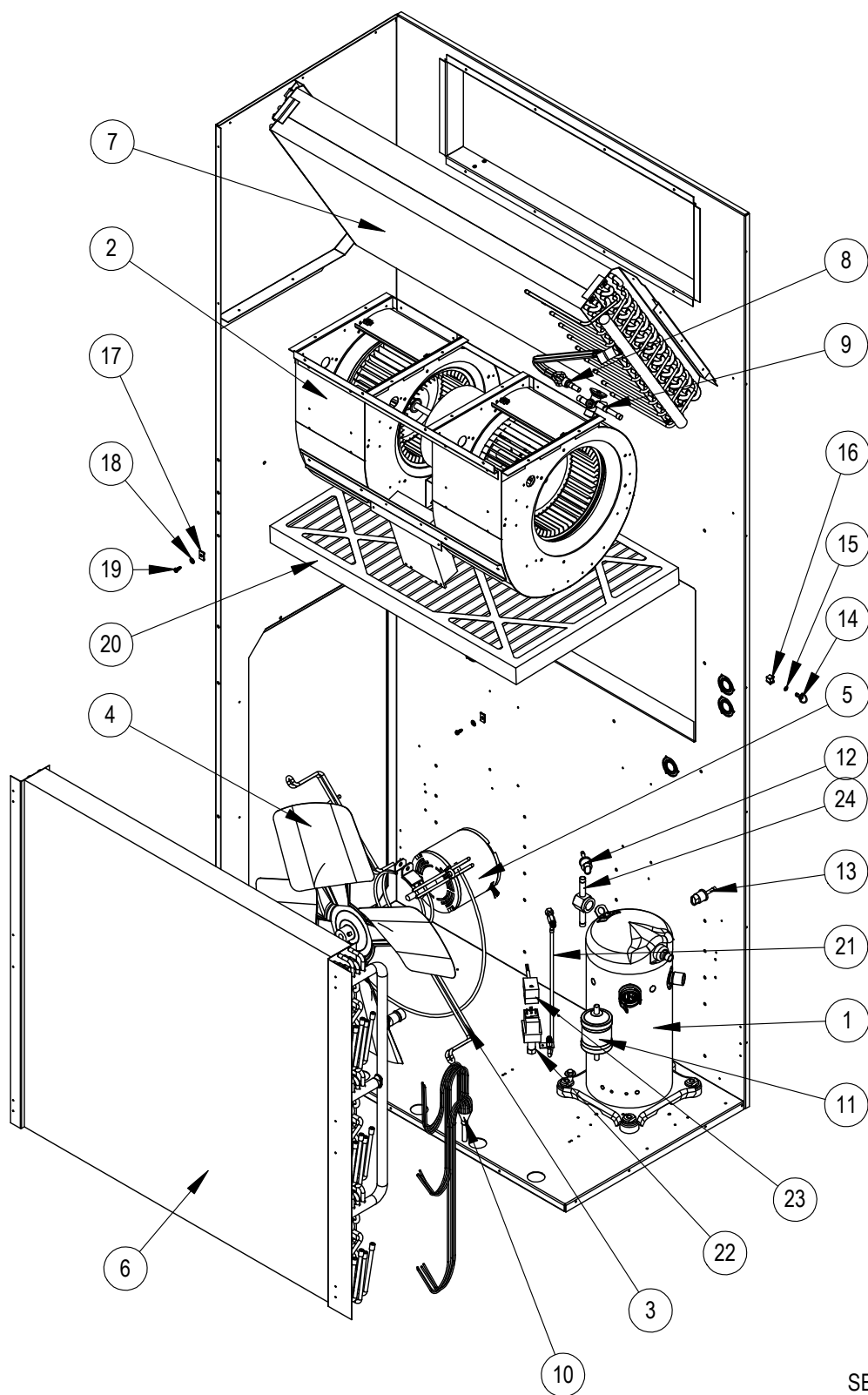
CABINET COMPONENTS – Left Hand

Dwg. No.	Part Number	Description	W48L2PQ	W60L2PQ	W72L2PQ
1	S127-482	Base	X	X	X
2	S501-826-* ①	Right Side	X	X	X
3	S501-891-* ①	Left Side	X	X	X
4	105Y878	Support Angle	X	X	X
5	105Y877	Support Angle	X	X	X
6	147-046	Evap. Angle	X	X	X
7	543-172-* ①	Heater Access Cover	X	X	X
8	S515-246-* ①	Upper Front	X	X	X
9	507-307-* ①	Top	X	X	X
10	S533-257-* ①	Control Panel Cover	X	X	X
11	S153-218-* ①	Disconnect Access Door	X	X	X
12	S111Y034	Outlet Airframe Assembly	X	X	X
13	135-129	Heat Shield	X	X	X
14	118-094-* ①	Condenser Grille	X	X	X
15	118-086-* ①	Side Grille	2	2	2
16	113-150-* ①	Rain Flashing	X	X	X
17	509-251	Back	X	X	X
18	125-070	Fan Shroud	X	X	X
19	523-145	Drain Pan Assembly	X	X	X
20	553-600-* ①	Hood Mounting Door	X	X	X
21	553-641	Filter Door	X	X	X
22	521Y517	Condenser Partition	X	X	X
23	131Y164	Filter Tray	X	X	X
24	131-165	Filter Tray Angle	X	X	X
25	137-209	Fill Plate	X	X	X
26	120-494	Blower Partition	X	X	X
27	S132-281	Inner Control Panel Cover	X	X	X
28	113-140	Bottom Support Bracket	X	X	X
29	Control Panel Assembly	See Control Panel Assembly Drawing & Parts List	X	X	X

① Exterior cabinet parts are manufactured with various paint color options. To ensure the proper paint color is received, reference the following codes:

Beige	-X	Buckeye Gray	-4
White	-1		

FUNCTIONAL COMPONENTS



SEXP-715

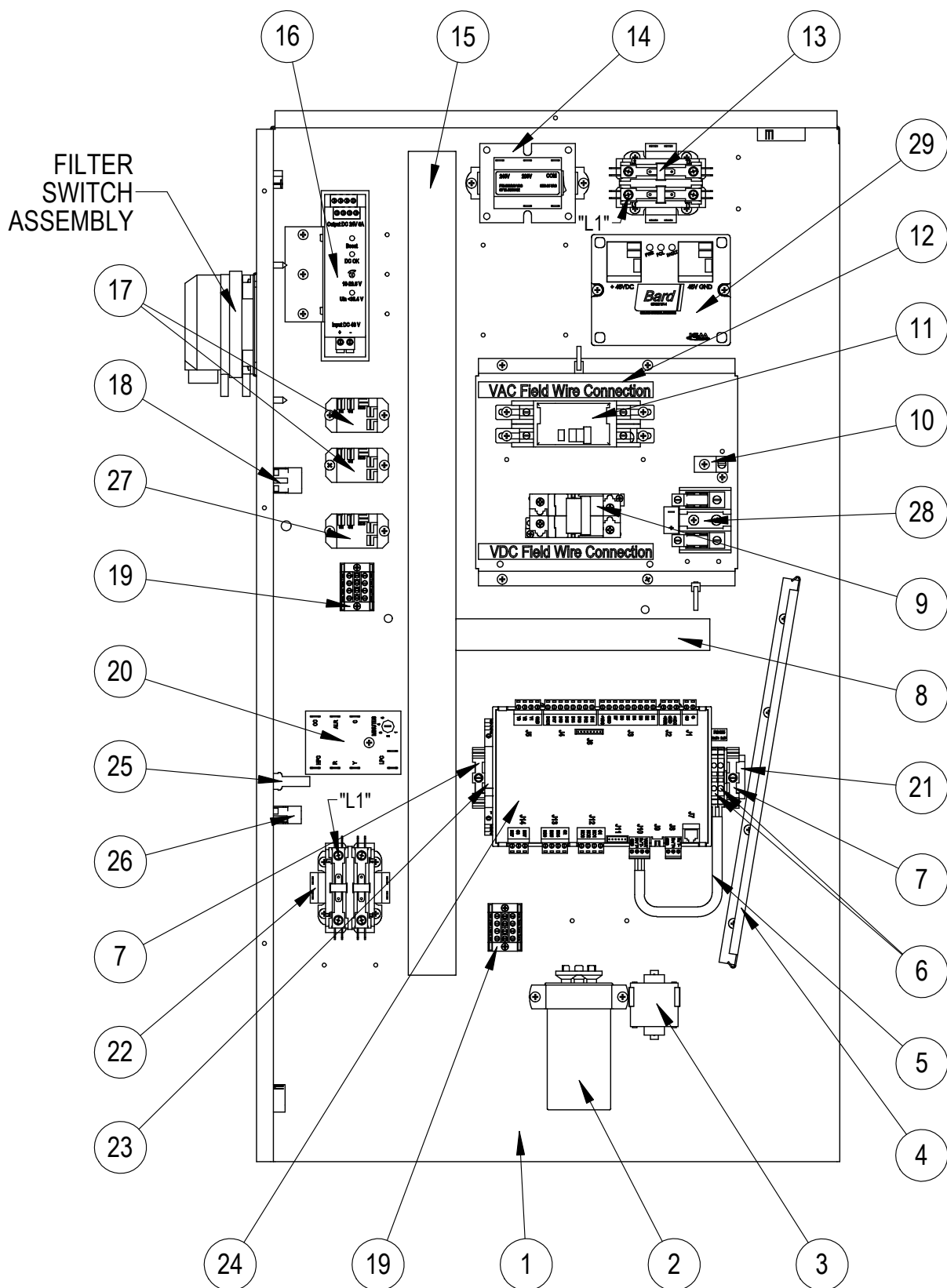
FUNCTIONAL COMPONENTS

Dwg. No.	Part Number	Description	W48A2PQ	W48L2PQ	W60A2PQ	W60L2PQ	W72A2PQ	W72L2PQ
1	8000-420	Compressor	X	X				
1	8000-419	Compressor			X	X		
1	8000-418	Compressor					X	X
2	900-351	Blower Assembly	X	X	X	X		
2	900-273-0018	Blower Assembly					X	X
3	8200-004	Fan Motor Mount	X	X	X	X	X	X
4	5151-060	Fan Blade	X	X	X	X	X	X
5	8107-027	Condenser Motor	X	X	X	X	X	X
6	5051-197	Condenser Coil	X	X	X	X	X	X
6	5054-197	Condenser Coil – Coated	X	X	X	X	X	X
7	5060-208BX	Evaporator Coil	X	X	X	X	X	X
7	5062-208BX	Evaporator Coil – Coated	X	X	X	X	X	X
8	800-0462	Cooling Distributor	X	X				
8	800-0463	Cooling Distributor			X	X		
8	800-0464	Cooling Distributor					X	X
11	5201-022	Filter Drier	X	X	X	X	X	X
12	8406-142	High Pressure Switch (Flare)	X	X	X	X	X	X
13	8406-140	Low Pressure Switch (Flare)	X	X	X	X	X	X
14	1171-022	1/4" Turn Fastener	X	X	X	X	X	X
15	1171-024	1/4" Retainer Clip	X	X	X	X	X	X
16	1171-023	1/4" Receptacle	X	X	X	X	X	X
20	7004-027	Air Filter 2" Pleated MERV 8 ①	X	X	X	X	X	X
20	7004-049	Air Filter 2" Pleated MERV 11 ①	X	X	X	X	X	X
20	7004-016	Air Filter 1" Throw-Away	X	X	X	X	X	X
22	8406-112	Low Ambient Control	X	X	X	X	X	X
NS	3000-1230	Compressor Power Plug	X	X	X	X	X	X
NS	8605-021	Crankcase Heater ①	X	X	X	X	X	X
NS	8301-056	Temperature/Humidity Sensor	X	X	X	X	X	X
NS	5910-1940	Wire Assembly	X	X	X	X	X	X
NS	6031-009	Coremax Valve Core	2	2	2	2	2	2

NS – Not Shown

① – Optional

CONTROL PANEL – Right Hand



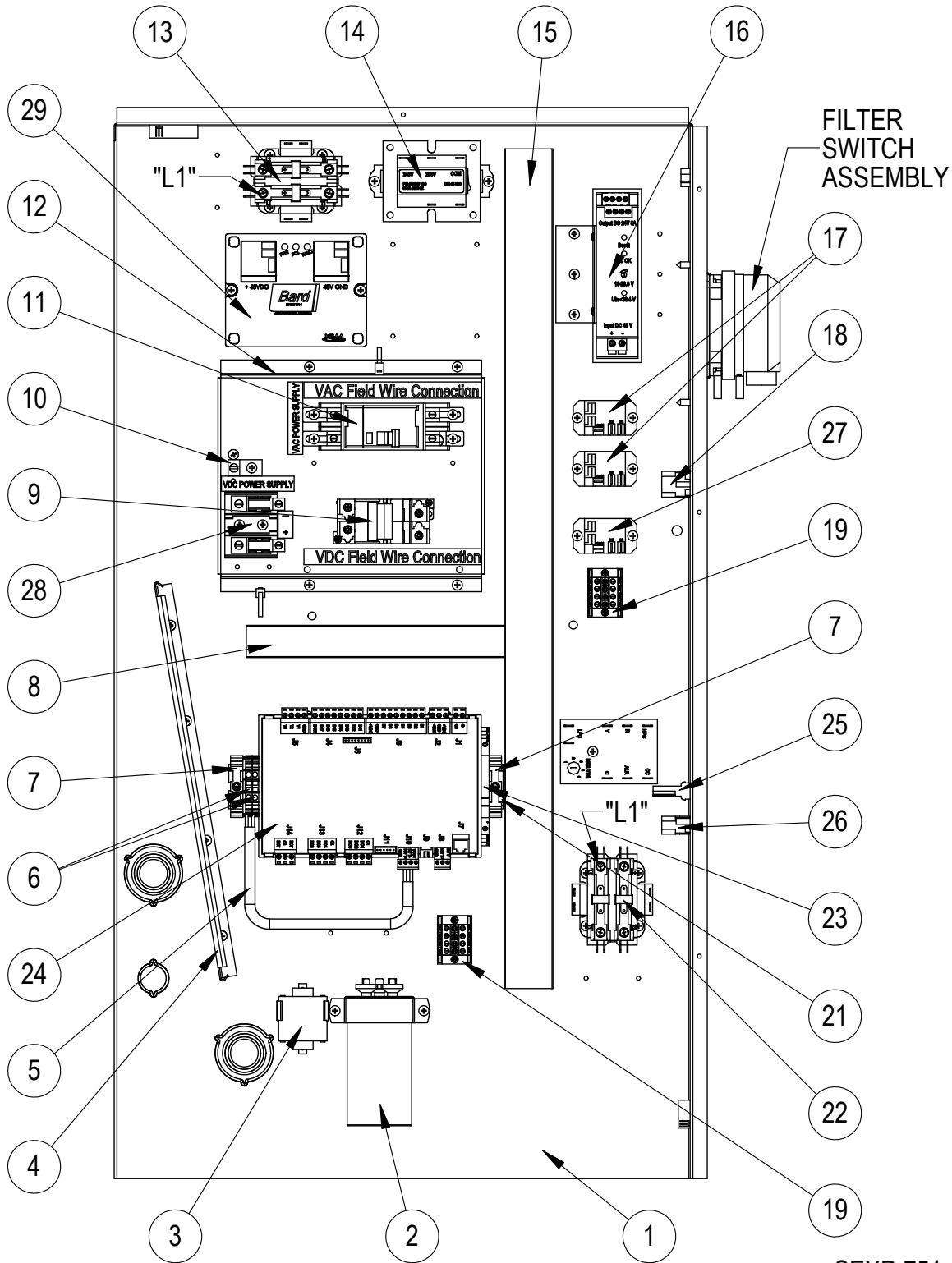
SEXP-750

CONTROL PANEL – Right Hand

Dwg. No.	Part Number	Description	W48A2PQ	W60A2PQ	W72A2PQ
1	517X380	Control Panel	X	X	X
2	8552-098	Capacitor 10 MFD 440V	X	X	X
3	8301-039	Aux Contact	X	X	X
4	135-122	Wire Shield	X	X	X
5	3020-004	12" 2 Conductor Shielded Cable	X	X	X
6	8611-150	Terminal Block for DIN Rail RS485	2	2	2
7	8611-144	End Clamp for DIN Rail	2	2	2
8	8615-061	3PH Cover Plate	X	X	X
9	8615-067	460V Disconnect	X	X	X
10	8611-006	Ground Terminal	X	X	X
11	8607-017	Terminal Block	X	X	X
12	8201-126	Phase Monitor	X	X	X
13	8201-032	Blower Relay	X	X	X
14	8407-064	Transformer 575-24-75VA	X	X	X
15	8611-139-2600	1-1/2" x 1-1/2" Cable Duct 26"	X	X	X
16	8614-042	Fuse			2
17	8201-130	Compressor SPDT Relay	X	X	X
18	8614-058	Fuse Holder			X
19	8607-037	Terminal Block 4 Position	2	2	2
20	8201-088	Compressor Control Module	X	X	X
21	8611-145	35mm DIN Rail 8-1/2"	X	X	X
22	8401-022	Contact 3-Pole	3	3	3
23	910-1946	Filter Switch Assembly	X	X	X
24	8301-003	Micro PC - Small	X	X	X
25	3000-1506	Wire Assembly	X	X	X
26	3000-1472	Wire Assembly	X	X	X
27	910-1935	Evap Temp Sensor	X	X	X
28	427-321	Heater Base	X	X	X
NS	4207-401	Wiring Diagram			X
NS	4207-402	Wiring Diagram	X	X	

NS – Not Shown

CONTROL PANEL – Left Hand



SEXP-751

CONTROL PANEL – Left Hand

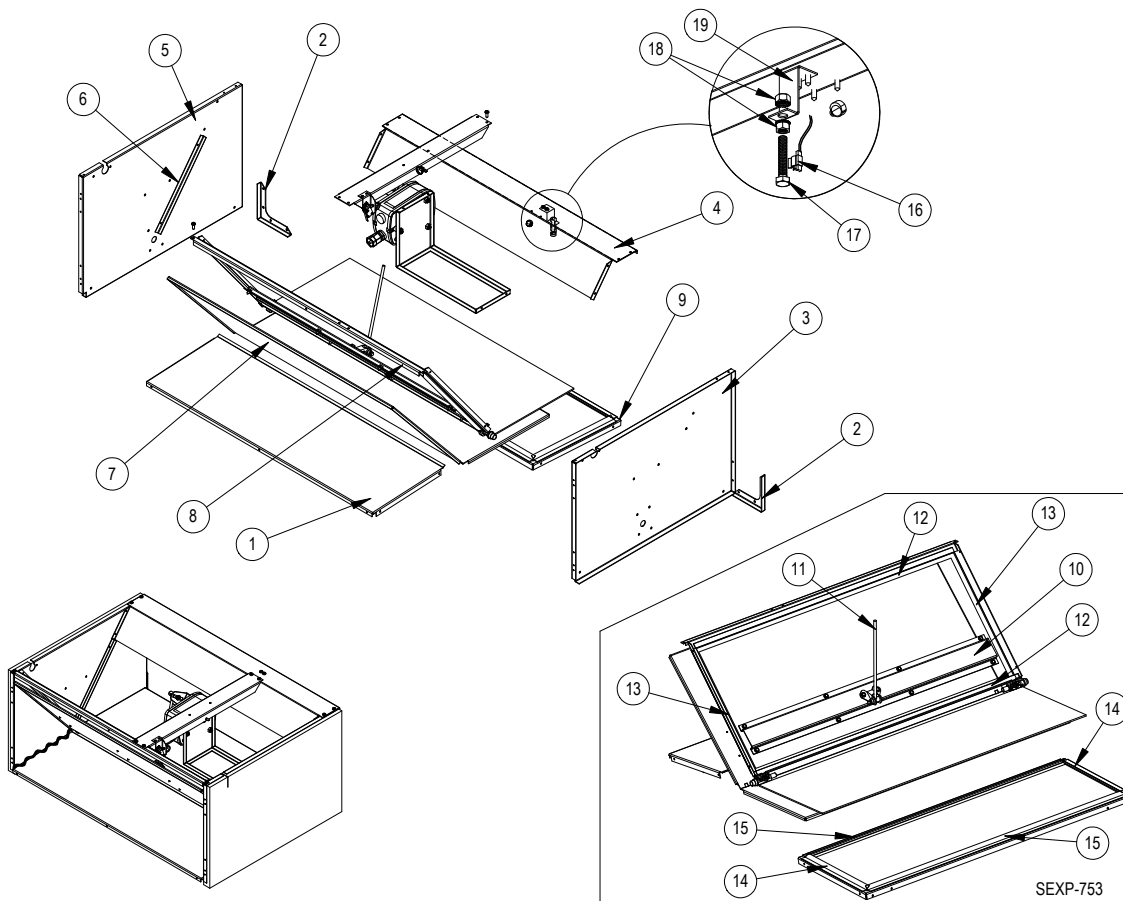
Dwg. No.	Part Number	Description	W48A2PQ	W60A2PQ	W72A2PQ
1	517Y380	Control Panel	X	X	X
2	8552-098	Capacitor 10 MFD 370V	X	X	X
3	8301-039	Aux Contact	X	X	X
4	135-122	Wire Shield	X	X	X
5	3020-004	12" 2 Conductor Shielded Cable	X	X	X
6	8611-150	Terminal Block for DIN Rail RS485	2	2	2
7	8611-144	End Clamp for DIN Rail	2	2	2
8	8615-064	3PH Cover Plate	X	X	X
9	8615-67	460V Disconnect	X	X	X
10	8611-006	Ground Terminal	X	X	X
11	8611-017	Terminal Block	2	2	2
12	8201-126	Phase Monitor	X	X	X
13	8201-032	Blower Relay	X	X	X
14	8407-048	Transformer 575-24-75VA	X	X	X
15	8611-139-2600	1-1/2" x 1-1/2" Cable Duct 26"	X	X	X
16	8614-042	Fuse			2
17	8201-130	Compressor SPDT Relay	X	X	X
18	8614-058	Fuse Holder			X
19	8607-037	Terminal Block 4 Position	2	2	2
20	8201-088	Compressor Control Module	X	X	X
21	8611-145	35mm DIN Rail 8-1/2"	X	X	X
22	8401-002	Contactor 2-Pole 40 Amp	3	3	3
23	910-1946	Filter Switch Assembly	X	X	X
24	8301-051-003	Micro PC - Small	X	X	X
25	3000-1506	Wire Assembly	X	X	X
26	3000-1472	Wire Assembly	X	X	X
27	910-1935	Evap Temp Sensor	X	X	X
28	127-421	Heater Base	X	X	X
NS	4207-401	Wiring Diagram			X
NS	4207-402	Wiring Diagram	X	X	

NS – Not Shown



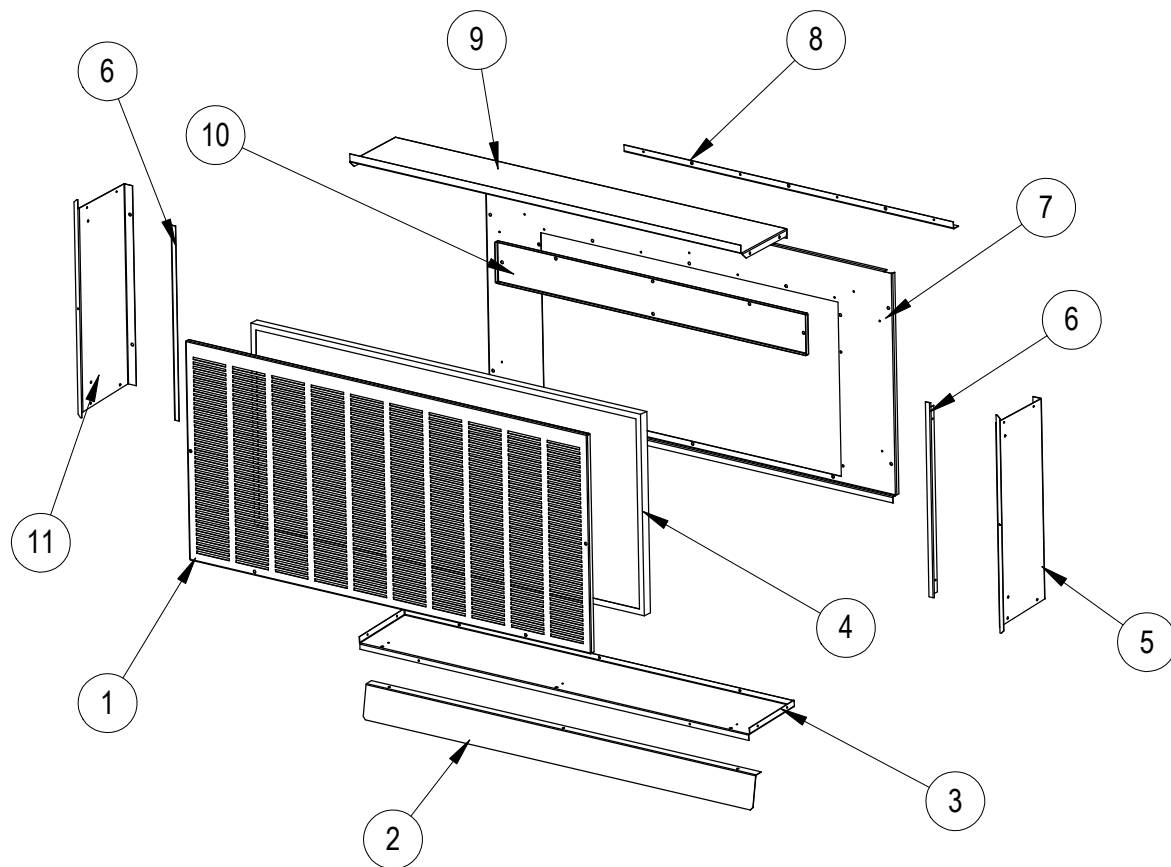
900-273-0018
900-351

FREECOOLING COMPONENTS



Dwg No.	Part Number	Description
1	137-734	Lower Front Partition
2	113-526	Corner Bracket
3	S101X852	Right Side
4	S137-735	Upper Rear Partition
5	S101Y852	Left Side
6	S105-1341	Blade Seal Angle
7	S139-323	Blade
8	S137-733	Upper Front Partition
9	S137-736	Lower Rear Partition
10	141-426	Blade Support
11	8602-077	1/4 x 9" Rod
12	1921-067-2909	29-9/16" Damper Blade Seal
13	1921-067-1300	13" Damper Blade Seal
14	1921-067-1011	10-11/16" Damper Blade Seal
15	1921-067-2906	29-3/8" Damper Blade Seal
16	8408-044	Defrost Support 10K Ohm Curve J w/ 5/16" Clip
17	1012-052	Hex Head Bolt 5/16 - 18x1-3/4" 0.0005 Zinc w/ Yellow Chromate
18	1012-210	5/16" Nut 0.0005 Zinc w/ Yellow Chromate
19	113-541	Sensor Bracket

FREECOOLING AIR HOOD



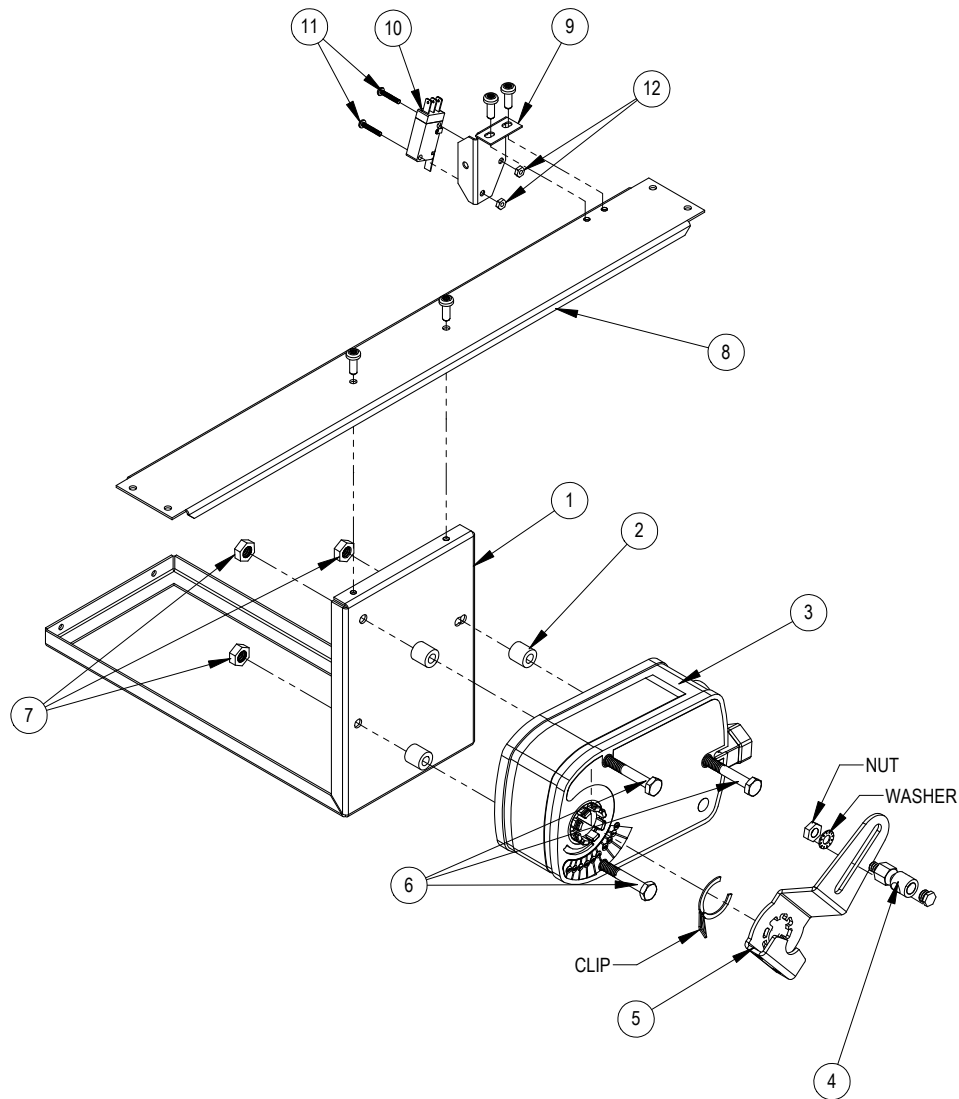
SEXP-752

Dwg. No.	Part Number	Description
1	115-283-* ①	Hooded Front Door
2	113-484-* ①	Bottom Divider Bracket
3	S127-489-* ①	Hood Bottom
4	7003-062	Mist Filter 40-1/4" x 17-7/8" x 7/8"
5	S101-870-* ①	Right Side
6	105-1342	Side Filter Angle
7	553-600-* ①	Hood Mounting Door
8	105-1343	Filter Door Angle
9	S107-344-* ①	Hood Top
10	553-596	Filter Door
11	S101-860-* ①	Left Side
	S920-0232	Complete Hood Assembly – Beige
	S920-0233	Complete Hood Assembly – White
	S920-0234	Complete Hood Assembly – Gray

① Exterior cabinet parts are manufactured with various paint color options. To ensure the proper paint color is received, reference the following codes:

Beige	-X	Buckeye Gray	-4
White	-1		

FREECOOLING DAMPER MOTOR



SEXP-754

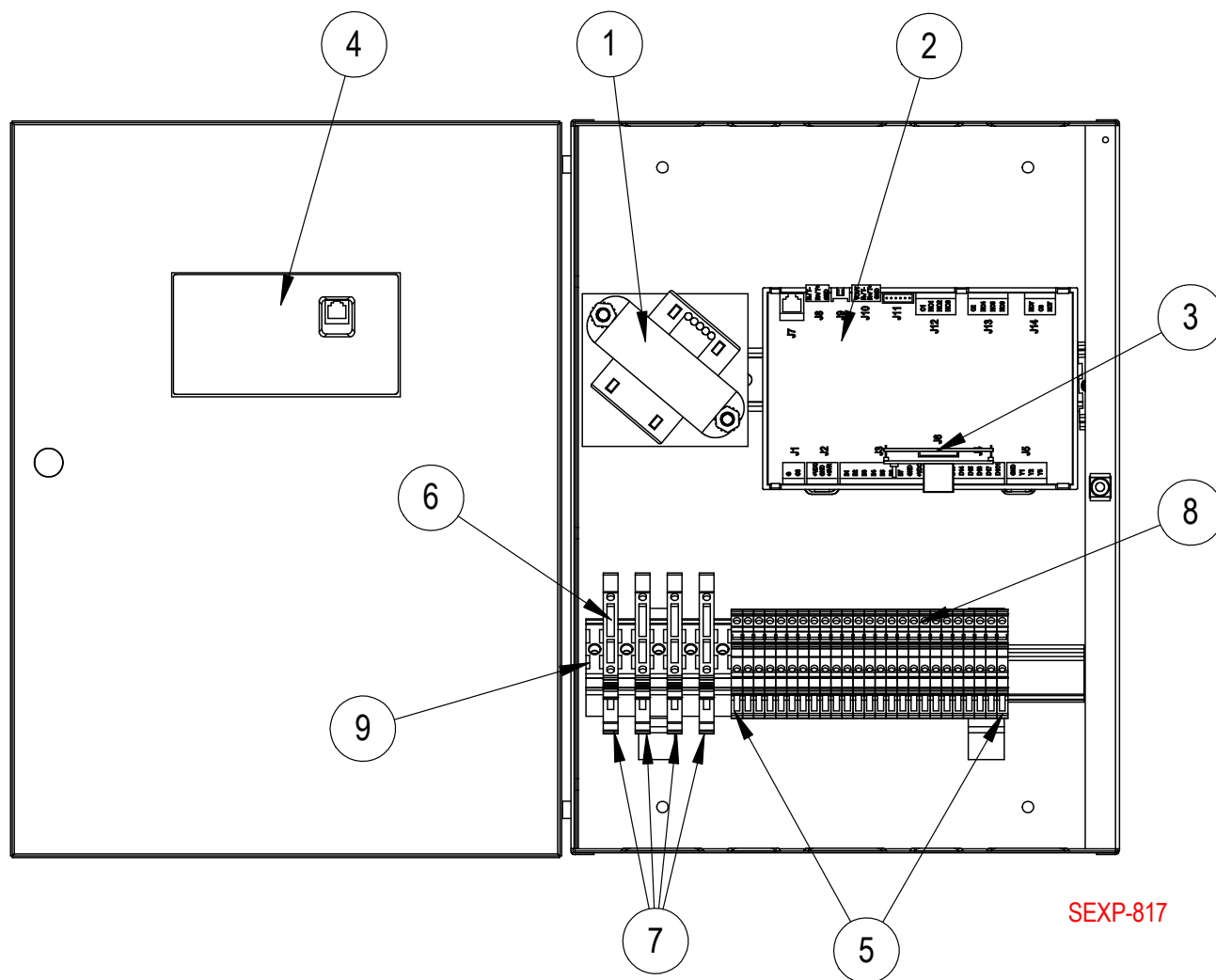
Dwg.
No.

Part Number

Description

1	141-428	Actuator Support Plate
2	5451-029	Nylon Sleeve 0.257" ID x 0.5" Long
3	8602-075	Direct Coupled Actuator
4	8602-037	Damper Motor M7415B1004
5	8602-078	Belimo Actuator Crank Arm 1/2"
6	1012-174	1/4" - 20x3 - 1/4 Hex Cap Screws
7	1012-201	1/4-20 Steel Keps Hex Nut Zinc
8	141-427	Actuator Support Bar
9	113-525	Blade Switch Bracket
10	8406-138	Lever Switch SPDT Sealed Pilot Duty
11	1012-178	4-40 x 5/8" Phillips Pan Head Machine Screw, Zinc Plated
12	1012-231	4-40 Steel Keps Hex Nut Zinc

BARD-LINK™ PLC LEAD/LAG CONTROLLER



BARD-LINK™ PLC LEAD/LAG CONTROLLER

Dwg. No.	Part Number	Description	LC5000-100
1	8407-067	Transformer	X
2	8301-051-004	Micro PC – Small, programmed for LC5000-100	X
3	8301-052-002	Web Card (Ethernet 1BaseT card for SNMP, FTP, HTTP, DHCP, DNS, BACnet over IP and BACnet Ethernet)	X
4	8301-053	Panel mounting display flush, pGDEvolution 132x64, black buttons with cable	X
5	8607-052	Grounded Terminal Block	2
6	8614-059	1.0 Amp Fuse	2
7	8607-039	Fused Terminal Block	2
8	8607-038	Terminal Block	23
9	8611-144	End Clamp (for din rail)	7
NS	8301-055	EMI Ferrite Filter	2
NS	8301-058	Remote Temp Sensor	X
NS	8301-059	TEC-EYE (Service Tool), 5 ft. telephone cable	X

NS – Not Shown