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# REPLACEMENT PARTS MANUAL

# Q-TEC SERIES PACKAGED HEAT PUMP

Models:

**QW2S2      QW3S2**  
**QW4S2      QW5S2**

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## 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.

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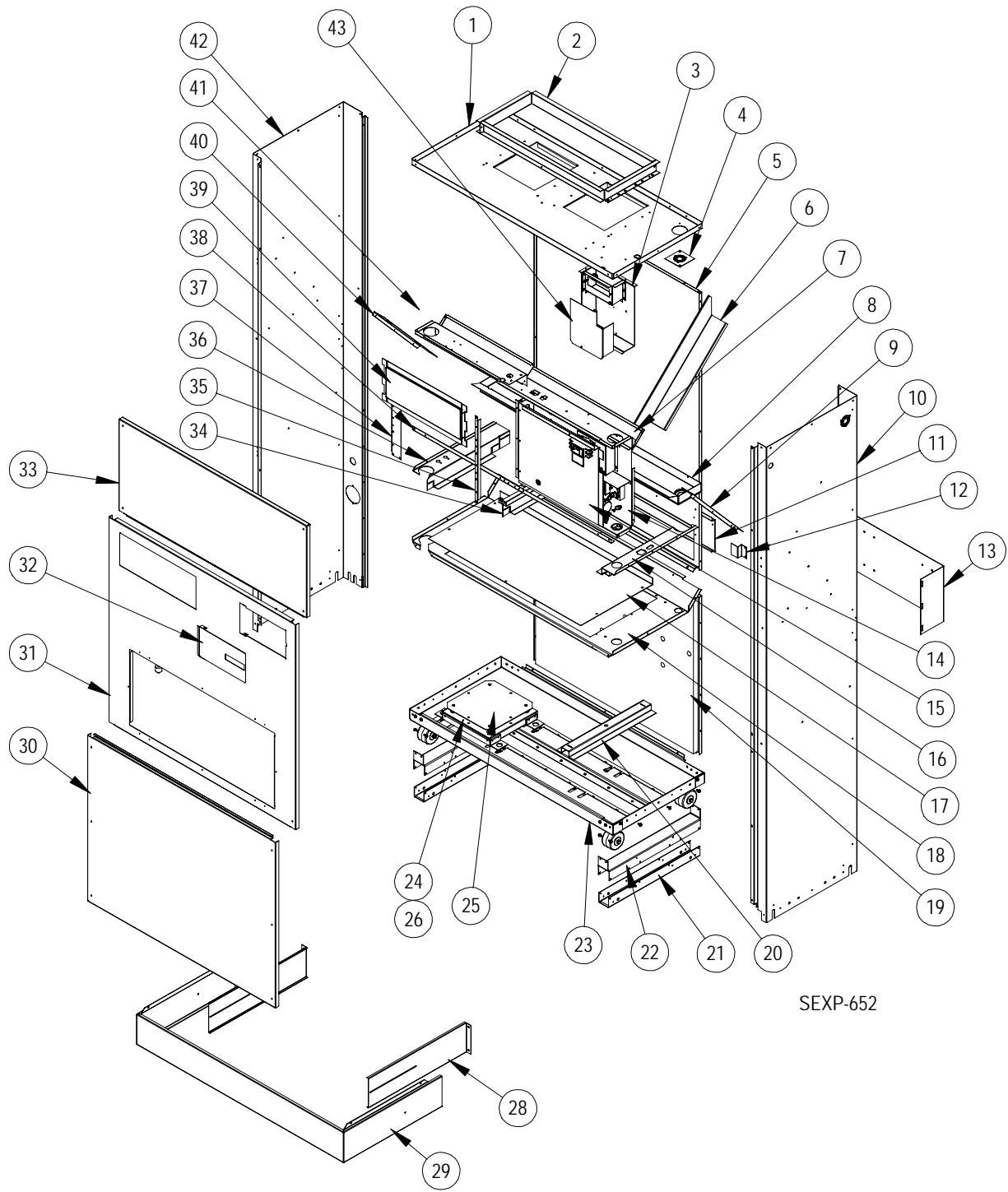
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Bard Manufacturing Company, Inc.  
Bryan, Ohio 43506  
*Since 1914...Moving ahead, just as planned.*

Manual: 2110-588C  
Supersedes: 2110-588B  
File: Tab 14  
Date: 05-17-13

# CABINET COMPONENTS



SEXP-652

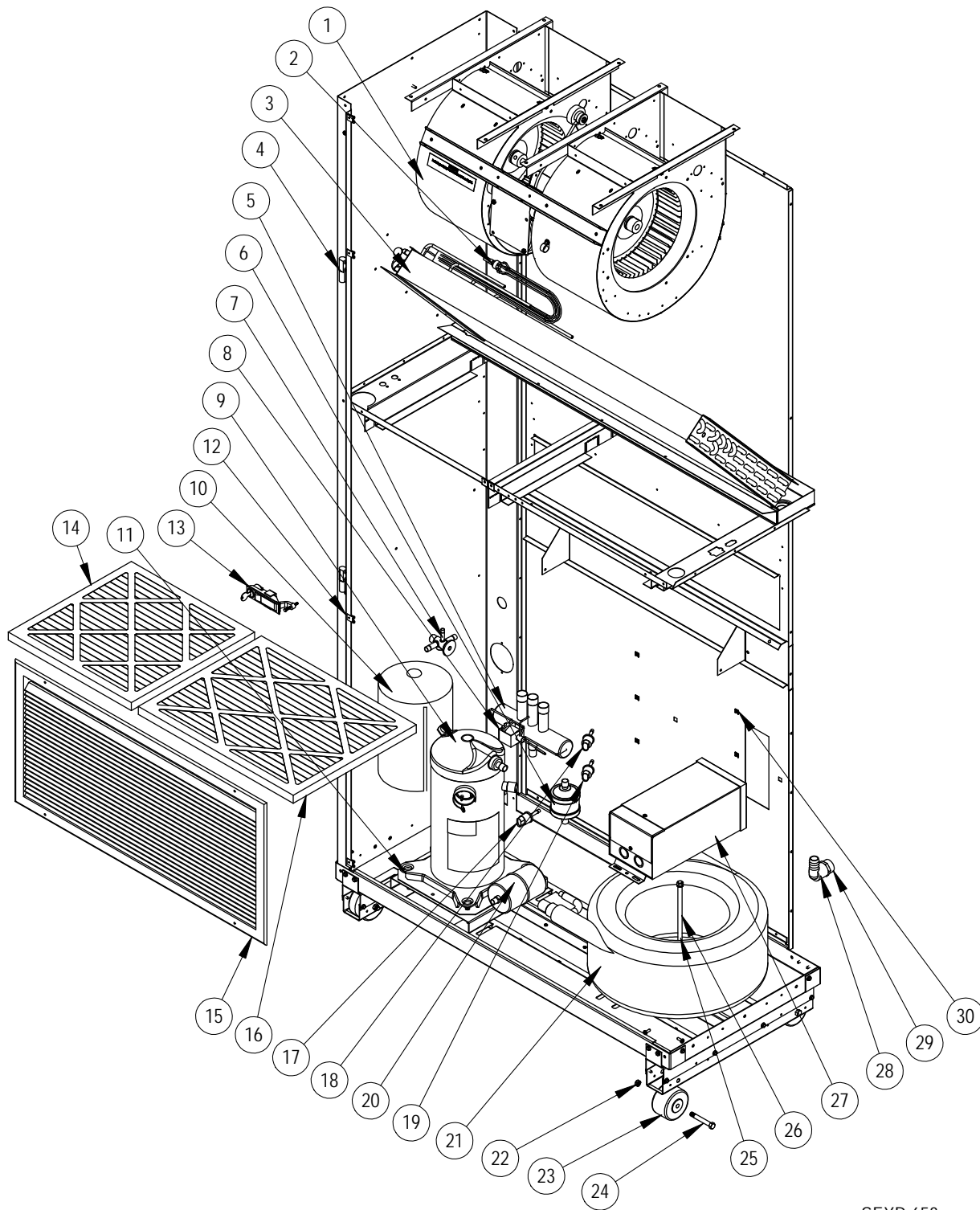
This Exploded View is referenced in Table on Page 3

# CABINET COMPONENTS

Drawing No.	Part No.	Description	QW2S2-A, -B, -C	QW4S2-A, -B, -C
			QW3S2-A, -B, -C	QW5S2-A, -B, -C
1	S507-279	Top Assembly	X	
1	S507-278	Top Assembly		X
2	111-142	Outlet Duct Flange	2	
2	111-138	Outlet Duct Flange		2
3	117-285	Low Voltage Box Assembly	X	X
4	136-359	T.K.O. Plate	X	X
5	509-231	Back Assembly	X	
5	509-230	Back Assembly		X
6	134-154	Wire Channel	X	X
7	534-191	Evaporator Coil Shield - Right	X	
7	534-195	Evaporator Coil Shield - Right		X
8	523-104	Evaporator Drain Pan Assembly	X	
8	523-105	Evaporator Drain Pan Assembly		X
9	140X277	Right Evaporator Support	X	X
10	501-557-*	Ride Side Assembly	X	X
11	542-054	Fresh Air Blank-Off Plate Assembly	X	X
12	103-443	Door Latch Offset	X	X
13	113-289	Wall Mounting Bracket	2	2
14	See Pages 7 & 9	Control Panel Components	X	X
15	S132-165	Circuit Breaker Door Inner (230V Models)	X	X
15	S132-173	Disconnect Door (460V Models)	X	X
16	113-382	Right Filter Bracket	X	
16	113-383	Right Filter Bracket		X
17	537-584	Condenser Blank-Off Plate	X	X
18	521-442	Condenser Partition Assembly	X	
18	521-439	Condenser Partition Assembly		X
19	509-233	Lower Back with Cage Nuts	X	
19	509-223	Lower Back with Cage Nuts		X
20	140-026	Water Coil Hold Down (230V Models)	X	X
20	140-278	Water Coil Hold Down (460V Models)	X	X
21	140-276	Lower Roller Support	2	2
22	140-280	Upper Roller Support	2	2
23	S127-384-X	Lower Base Assembly	X	
23	S127-379-X	Lower Base Assembly		X
24	141-368	Compressor Support	X	X
25	140-369	Compressor Support Plate	X	X
26	5451-018	Motor Mount Grommet	X	X
28	135-258-6	Base Trim Extension	2	2
29	535-253-6	Base Trim Assembly with Extension	X	
29	535-259-6	Base Trim Assembly with Extension		X
30	552-332-*	Condenser Door Assembly	X	
30	553-470-*	Condenser Door Assembly		X
31	553-468-*	Filter Door Assembly w/Circuit Breaker Door	X	
31	553-469-*	Filter Door Assembly w/Circuit Breaker Door		X
31	553-516-*	(with C & S Control Option)	X	
31	553-517-*	(with C & S Control Option)		X
31	553-572-*	(with "L" Control Option)	X	
31	553-573-*	(with "L" Control Option)		X
32	153-336-*	Circuit Breaker Door		X
33	S552-331-*	Blower Door Assembly	X	
33	S552-333-*	Blower Door Assembly		X
34	112X283	Center Right Filter Bracket	X	X
34	112Y283	Center Left Filter Bracket	X	X
35	104-1096	Right Thermostat Support Angle	X	X
36	113-305	Left Filter Bracket	X	X
37	104-1157	Left Thermostat Support Angle	X	X
38	104-1097	Front Filter Angle	X	
38	104-1101	Front Filter Angle		X
39	See Page 13	Thermostat Mounting Plate	X	X
40	140Y277	Left Evaporator Support	X	X
41	534-190	Left Evaporator Coil Shield	X	X
42	501-573-*	Left Side Assembly	X	X
43	133-201	Low Voltage Box Cover	X	X

\* Exterior cabinet parts are manufactured with various paint color options. To ensure that you receive the proper paint color, you must include the complete model and serial number of the unit for which cabinet parts are being ordered.

# FUNCTIONAL COMPONENTS



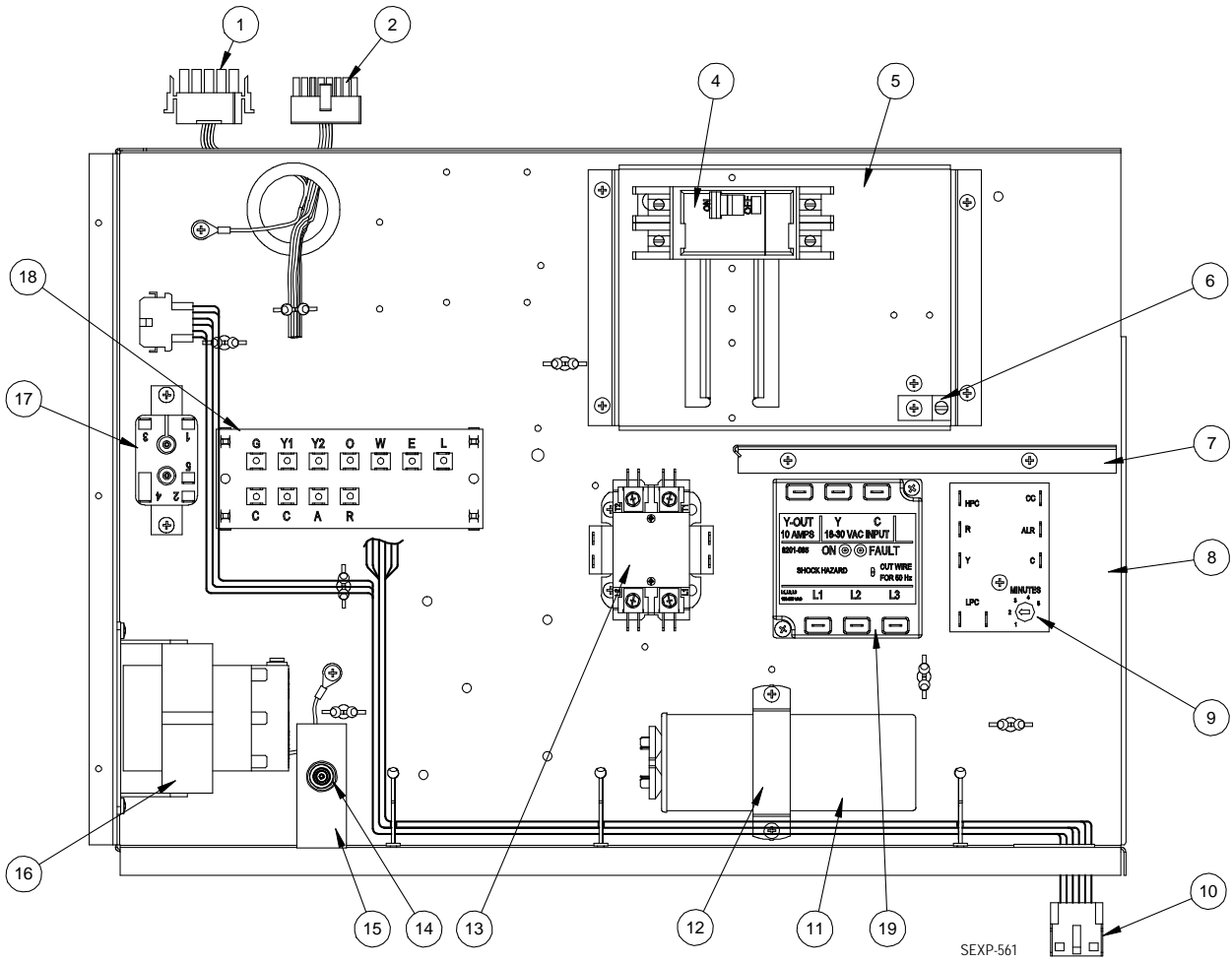
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**This Exploded View is referenced in Table on page 5**

# FUNCTIONAL COMPONENTS

Drawing No.	Part No.	Description	QW2S2-A	QW2S2-B	QW2S2-C	QW3S2-A	QW3S2-B	QW3S2-C	QW4S2-A	QW4S2-B	QW4S2-C	QW5S2-A	QW5S2-B	QW5S2-C
1	S900-301-002	Blower Assembly	X	X	X									
1	S900-299-002	Blower Assembly				X	X	X						
1	S900-300-003	Blower Assembly							X	X	X			
1	S900-300-004	Blower Assembly										X	X	X
2	5625-007	Distributor Cooling	X	X	X	X	X	X						
2	5625-008	Distributor Cooling							X	X	X			
2	5625-010	Distributor Cooling										X	X	X
3	5060-118BX	Evaporator Coil	X	X	X	X	X	X						
3	5060-150BX	Evaporator Coil							X	X	X			
3	5060-119BX	Evaporator Coil										X	X	X
4	5400-005	Hinge	2	2	2	2	2	2	2	2	2	2	2	2
5	5650-038	Reversing Valve with 24V Solenoid Coil	X	X	X									
5	5650-039	Reversing Valve with 24V Solenoid Coil				X	X	X						
5	5650-040	Reversing Valve with 24V Solenoid Coil							X	X	X	X	X	X
6	5220-013	Discharge Muffler	X	X	X	X	X	X	X	X	X	X	X	X
7	5651-192	TXV	X	X	X									
7	5651-202	TXV				X	X	X						
7	5651-203	TXV							X	X	X			
7	5651-204	TXV										X	X	X
8	5650-042	Reversing Valve Solenoid, Red Casing (Ranco)	X	X	X	X	X	X	X	X	X	X	X	X
8	5650-043	Reversing Valve Solenoid, Black Casing (Wilspec)	X	X	X	X	X	X	X	X	X	X	X	X
8	5650-046	Reversing Valve Solenoid, Black Casing (San Hua)	X	X	X	X	X	X	X	X	X	X	X	X
9	8000-394	Compressor	X											
9	8000-396	Compressor		X										
9	8000-398	Compressor			X									
9	8000-379	Compressor				X								
9	8000-380	Compressor					X							
9	8000-381	Compressor						X						
9	8000-382	Compressor							X					
9	8000-383	Compressor								X				
9	8000-384	Compressor									X			
9	8000-385	Compressor										X		
9	8000-386	Compressor											X	
9	8000-387	Compressor												X
10	8002-012	Sound Cover	X	X	X	X	X	X						
10	8002-013	Sound Cover							X	X	X	X	X	X
11	5451-018	Compressor Secondary Grommet	X	X	X	X	X	X	X	X	X	X	X	X
12	1012-315	"U" Clip Fastener	8	8	8	8	8	8	8	8	8	8	8	8
13	1171-049	Keylatch/Circuit Breaker Door	X	X	X	X	X	X	X	X	X	X	X	X
14	7004-034	Air Filter 2 Pleated (16 x 16 x 2)	X	X	X	X	X	X	X	X	X	X	X	X
15	7051-034	Return Air Grille (for Beige & Buckeye Gray Units)	X	X	X	X	X	X						
15	7051-061	Return Air Grille (for Vinyl Units)	X	X	X	X	X	X						
15	7051-039	Return Air Grille (for Beige & Buckeye Gray Units)							X	X	X	X	X	X
15	7051-063	Return Air Grille (for Vinyl Units)							X	X	X	X	X	X
16	7004-035	Air Filter 2 Pleated (16 x 20 x 2)	X	X	X	X	X	X						
16	7004-025	Air Filter 2 Pleated (16 x 25 x 2)							X	X	X	X	X	X
17	1804-0316	High Pressure Switch	X	X	X	X	X	X	X	X	X	X	X	X
18	1804-0496	Low Pressure Switch 75 PSIG	X	X	X	X	X	X	X	X	X	X	X	X
19	1804-0499	Low Pressure Switch 55 PSIG	X	X	X	X	X	X	X	X	X	X	X	X
20	5201-019	Filter / Drier	X	X	X	X	X	X						
20	5201-020	Filter / Drier							X	X	X	X	X	X
21	S917-0148	Water Coil Assembly	X	X	X	X	X	X						
21	S917-0149	Water Coil Assembly (Optional Cupronickel Coil)	X	X	X	X	X	X						
21	S917-0150	Water Coil Assembly							X	X	X			
21	S917-0151	Water Coil Assembly (Optional Cupronickel Coil)							X	X	X			
21	S917-0152	Water Coil Assembly										X	X	X
21	S917-0153	Water Coil Assembly (Optional Cupronickel Coil)										X	X	X
22	1012-224	Nut - Locking	4	4	4	4	4	4	4	4	4	4	4	4
23	1171-035	Wheel	4	4	4	4	4	4	4	4	4	4	4	4
24	1012-129	Bolt - Shoulder	4	4	4	4	4	4	4	4	4	4	4	4
25	1012-226	Cage Nut	X	X	X	X	X	X	X	X	X	X	X	X
26	1012-167	3/8 x 7-1/2 Hex Head Bolt	X	X	X	X	X	X						
26	1012-168	3/8 x 9 Hex Head Bolt							X	X	X			
26	1012-169	3/8 x 10 Hex Head Bolt										X	X	X
27	8407-058	Stepdown Transformer 1.0 KVA	X	X	X	X	X	X	X	X	X			
27	8407-003	Stepdown Transformer 1.5 KVA (Units w/ERV)	X	X	X	X	X	X						
27	8407-004	Stepdown Transformer 2.0 KVA (Units w/ERV)							X	X	X	X	X	X
27	8407-003	Stepdown Transformer 1.5 KVA										X	X	X
28	6094-007	Barbed Drain Fitting	X	X	X	X	X	X	X	X	X	X	X	X
29	6093-011	3/4 Male Adapter	X	X	X	X	X	X	X	X	X	X	X	X
30	1012-218	1/4 Cage Nut	6	6	6	6	6	6	6	6	6	6	6	6
NS	4113-102	Unit Wiring Diagram	X			X			X			X		
NS	4113-200	Unit Wiring Diagram		X			X			X			X	
NS	4113-300	Unit Wiring Diagram			X			X			X			X

# CONTROL PANEL COMPONENTS



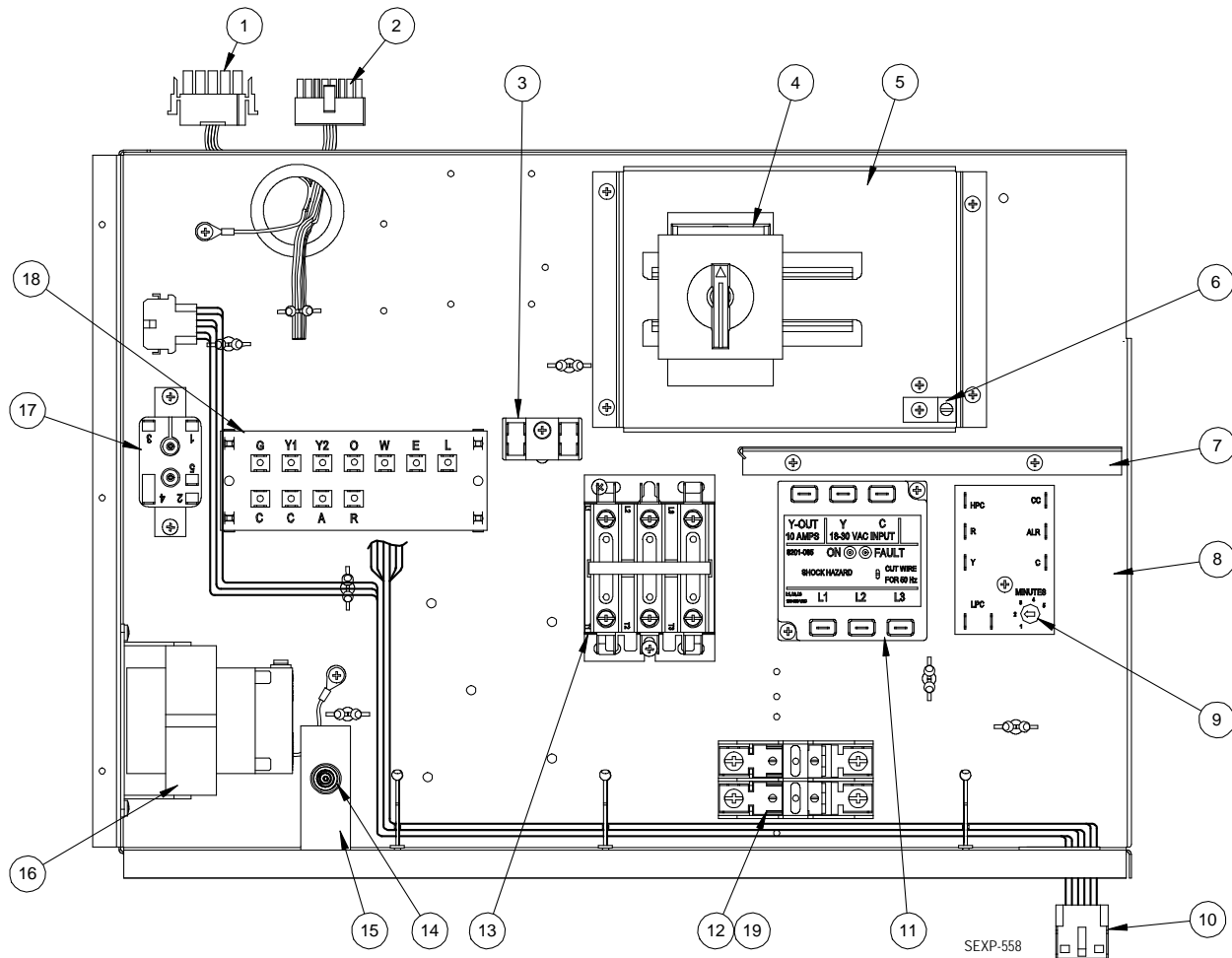
This Exploded View is referenced in Table on page 7

# CONTROL PANEL COMPONENTS

Drawing No.	Part No.	Description	QW2S2-A	QW2S2-B	QW3S2-A	QW3S2-B	QW4S2-A	QW4S2-B	QW5S2-A	QW5S2-B
1	3000-1331	Wire Assembly	X	X	X	X	X	X	X	X
2	3000-1327	Wire Assembly	X	X	X	X	X	X	X	X
4	8615-037	Circuit Breaker 2 Pole 30A	X							
4	8615-054	Circuit Breaker 3 Pole 20A		X						
4	8615-055	Circuit Breaker 2 Pole 40A			X					
4	8615-052	Circuit Breaker 3 Pole 30A				X				
4	8615-040	Circuit Breaker 2 Pole 50A					X			
4	8615-042	Circuit Breaker 3 Pole 35A						X		
4	8615-041	Circuit Breaker 2 Pole 60A							X	
4	8615-043	Circuit Breaker 3 Pole 40A								X
5	126-267	Circuit Breaker Base	X	X	X	X	X	X	X	X
6	8611-006	Terminal	X	X	X	X	X	X	X	X
7	117-242	Circuit Breaker Box Partition	X	X	X	X	X	X	X	X
8	117-287	Control Panel	X	X	X	X	X	X	X	X
9	8201-088	Compressor Control Module	X	X	X	X	X	X	X	X
10	3000-1325	Wire Assembly	X	X	X	X	X	X	X	X
11	8552-086	Capacitor 35 - 370V	X							
11	8552-035	Capacitor 40 - 370V			X					
11	8552-095	Capacitor 30 - 370V					X			
11	8552-096	Capacitor 40 - 440V							X	
12	8550-006	Capacitor Bracket	X				X			
12	8550-007	Capacitor Bracket			X				X	
13	8401-025	Contact	X		X		X		X	
13	8401-002	Contact		X		X		X		X
14	8611-094	Indicator Light	X	X	X	X	X	X	X	X
15	113-384	Light Bracket	X	X	X	X	X	X	X	X
16	8407-048	Transformer	X	X	X	X	X	X	X	X
17	8201-048	Relay, DPDT	X	X	X	X	X	X	X	X
18	8607-029	Terminal Strip	X	X	X	X	X	X	X	X
19	8201-126	3 Phase Line Monitor		X		X		X		X

**This Table references Exploded View on Page 6**

# CONTROL PANEL COMPONENTS



This Exploded View is referenced in Table on page 9



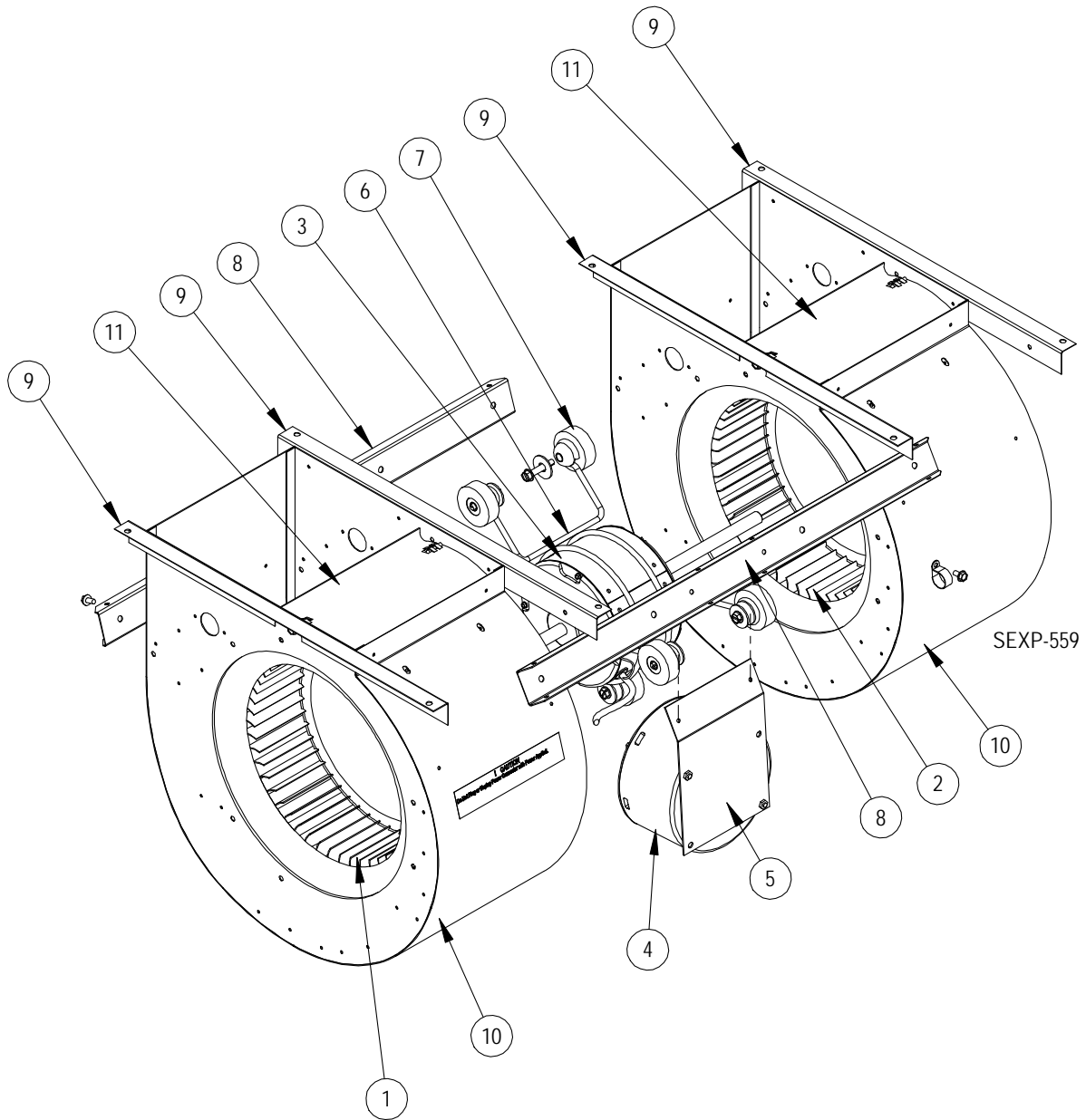
# CONTROL PANEL COMPONENTS

Drawing No.	Part No.	Description	QW2S2-C	QW3S2-C	QW4S2-C	QW5S2-C
1	3000-1331	Wire Assembly (Blower Power)	X	X	X	X
2	3000-1327	Wire Assembly (Blower Control)	X	X	X	X
3	8607-017	Terminal Block	X	X	X	X
4	S8615-068	460V Rotary Disconnect	X	X	X	X
5	126-323	Rotary Disconnect Base	X	X	X	X
6	8611-006	Terminal	X	X	X	X
7	117-242	Circuit Breaker Box Partition	X	X	X	X
8	117-287	Control Panel	X	X	X	X
9	8201-088	Compressor Control Module	X	X	X	X
10	3000-1325	Wire Assembly (Vent Control)	X	X	X	X
11	8201-126	3 Phase Line Monitor	X	X	X	X
12	8614-041	Fuse Block	X	X	X	X
13	8401-002	Contactor	X	X	X	X
14	8611-094	Indicator Light	X	X	X	X
15	113-384	Light Bracket	X	X	X	X
16	8407-050	Transformer	X	X	X	X
17	8201-048	Relay, DPDT	X	X	X	X
18	8607-029	Terminal Strip	X	X	X	X
19	8614-047	Fuse 3.2A	2	2	2	
19	8614-046	Fuse 5A (Units with ERV)	2	2		
19	8614-042	Fuse 7A (Units with ERV)			2	2
19	8614-046	Fuse 5A				2

**This Table references Exploded View on Page 8**

# BLOWER ASSEMBLY COMPONENTS

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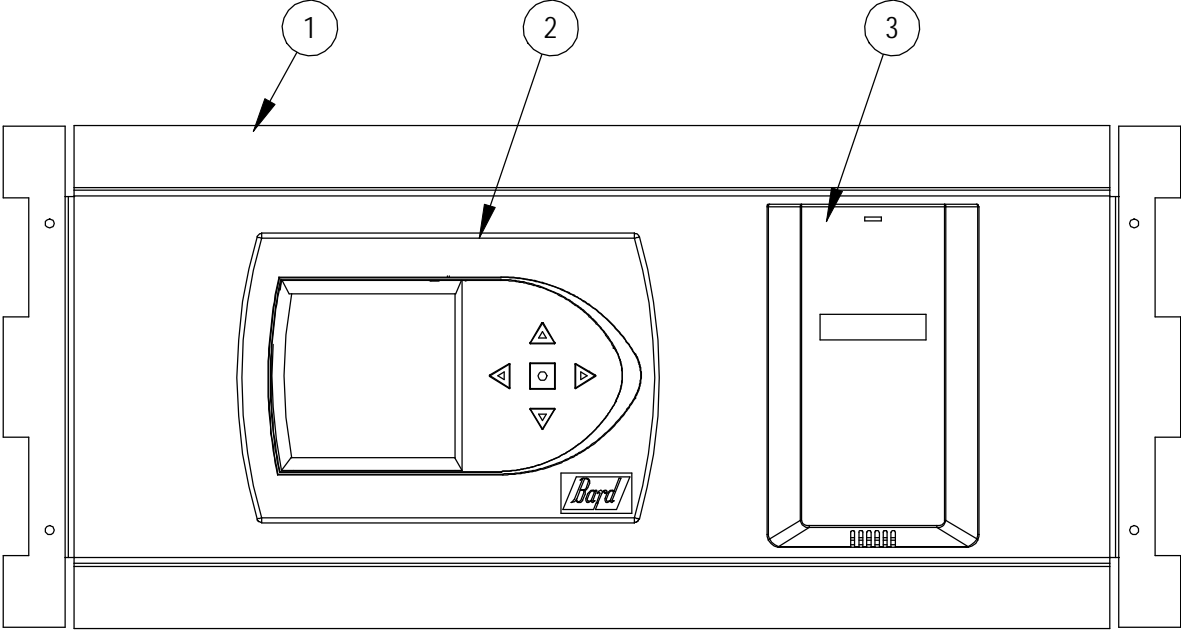


# BLOWER ASSEMBLY COMPONENTS

Drawing No.	Part No.	Description	900-301-002	900-299-002	900-300-003	900-300-004
1	5152-096	Blower Wheel	X	X		
1	5152-011	Blower Wheel			X	X
2	5152-072	Blower Wheel	X	X		
2	5152-012	Blower Wheel			X	X
3	S8105-060-0066	1/3 HP Programmed Motor	X			
3	S8106-052-0067	1/2 HP Programmed Motor		X		
3	S8107-017-0068A	3/4 HP Programmed Motor			X	
3	S8107-017-0069A	3/4 HP Programmed Motor				X
4	C8105-060-0066	Programmed Motor Control Only	X			
4	C8106-052-0067	Programmed Motor Control Only		X		
4	C8107-017-0068A	Programmed Motor Control Only			X	
4	C8107-017-0069A	Programmed Motor Control Only				X
5	113-380	Blower Motor Control Bracket	X	X	X	X
6	8200-040	Dual Motor Mount	X	X	X	X
7	5451-011	Grommet	6	6	6	6
8	165-572	Blower Support Channel	2	2	2	2
9	104-980	Blower Angle	4	4	4	4
10	151-117	Blower Housing	2	2		
10	151-101	Blower Housing			2	2
11	144-167	Diffuser	2	2		
11	144-166	Diffuser			2	2

# OPTIONAL CLIMATE CONTROLS

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SEXP-560

## OPTIONAL CLIMATE CONTROLS

Drawing No.	Part No.	Description	ALL UNITS						
			Option X	Option D	Option H	Option K	Option 5	Option 6	Option 7
1	S127-313-*	Thermostat Plate	X						
1	S127-308-*	Thermostat Plate		X			X		X
1	S127-372-*	Thermostat Plate			X				
1	S127-409-*	CO <sub>2</sub> Plate				X			
1	S127-451-*	Control Opt. Plate						X	
2	8403-060	Electronic / Programmable Manual / Auto Changeover		X	X				
2	8403-069	Electronic / Programmable with BACnet					X	X	
2	8403-071	Electronic BACnet with IR Detection, 3H, 2C							X
3	8403-067	CO <sub>2</sub> Sensor with Relay			X	X		X	
NS	4115-100	Wiring Diagram		X					
NS	4115-101	Wiring Diagram			X				
NS	4115-102	Wiring Diagram	X						
NS	4115-105	Wiring Diagram				X			
NS	4115-110	Wiring Diagram					X		X
NS	4115-111	Wiring Diagram						X	
NS	8607-021	Terminal Strip 8 Terminal	X						
NS	8607-029	Terminal Strip	X			X			
NS	3000-1332	Wire Assembly Thermostat Connection	X			X			
NS	3000-1333	Wire Assembly CO <sub>2</sub> Control Connection	X						
NS	3000-1334	Wire Assembly Thermostat Connection		X	X				
NS	3000-1412	Wire Assembly CO <sub>2</sub> Control Connection			X	X		X	
NS	3000-1421	Wire Assembly Thermostat Connection					X	X	X

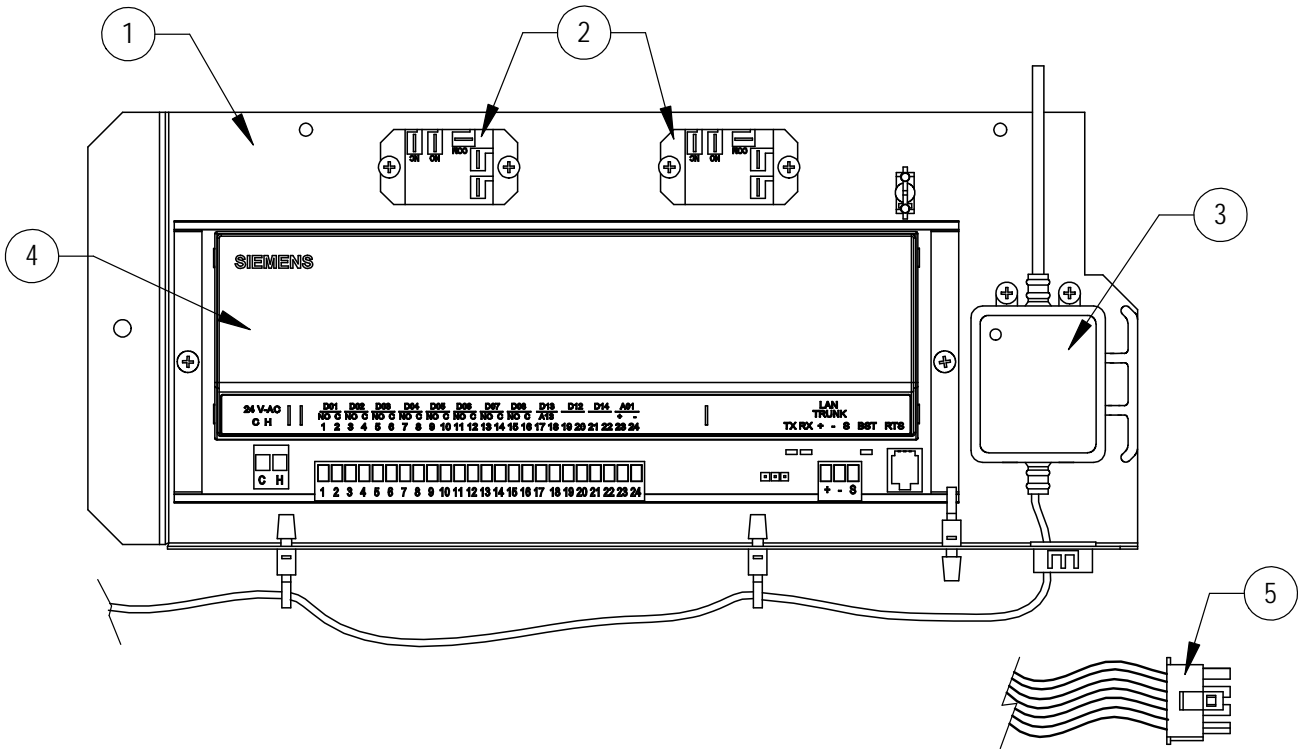
\* Exterior cabinet parts are manufactured with various paint color options. To ensure that you receive the proper paint color, you must include the complete model and serial number of the unit for which cabinet parts are being ordered.

### CLIMATE CONTROL OPTION NOMENCLATURE AS SHOWN IN UNIT MODEL NUMBER

QW 3S2 - A 02 X X X X X X

- X – None
- D – Electronic, programmable, manual changeover
- H – Electronic, programmable, manual/auto changeover, CO<sub>2</sub> Control
- K – CO<sub>2</sub> Control with remote thermostat connection
- 5 – Viconics VT7652H5000B with BACnet
- 6 – Viconics VT7652H5000B with BACnet, CO<sub>2</sub> Control
- 7 – Viconics VT7600H5500B with BACnet, IR Sensing

# OPTIONAL CLIMATE CONTROLS



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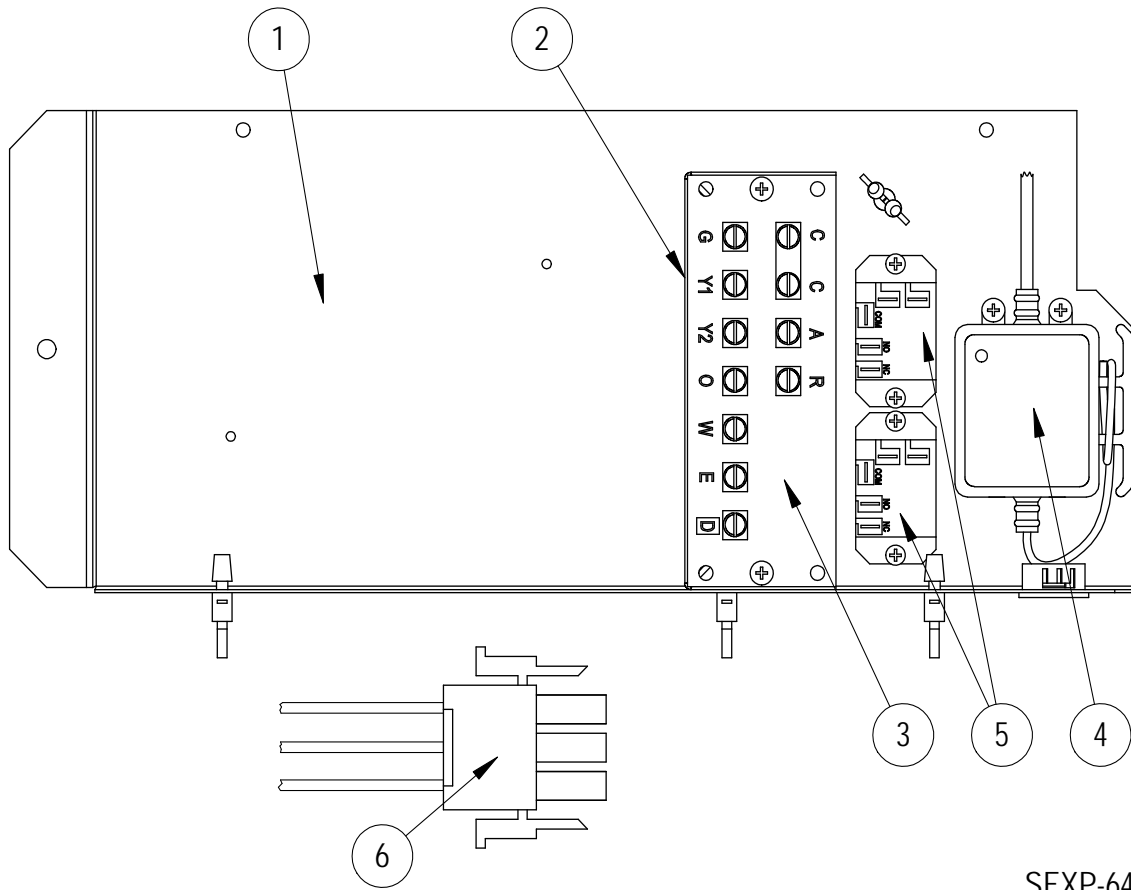
## OPTIONAL CLIMATE CONTROLS

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<b>Drawing No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Option S</b>
1	117-325	Control Panel	X
2	8201-130	Relay, SPDT, Pilot Duty	2
3	S910-1820	Condensate Overflow Assembly	X
4	8403-068	Siemens DDC Interface	X
5	3000-1414	Wire Harness	X
NS	4115-106	Wiring Diagram	X
NS	133-122	Control Panel Cover	X

# OPTIONAL CLIMATE CONTROLS

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SEXP-646



## OPTIONAL CLIMATE CONTROLS

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<b>Drawing No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Option C</b>
1	117-328	Control Panel	X
2	117-329	Low Voltage Control Box	X
3	8607-029	Low Voltage Terminal Strip	X
4	910-1822	Condensate Overflow Assembly	X
5	8201-130	Relay, SPDT Pilot Duty	2
6	3000-1415	Wire Harness	X
NS	4115-107	Wiring Diagram	X
NS	133-222	Control Panel Cover	X

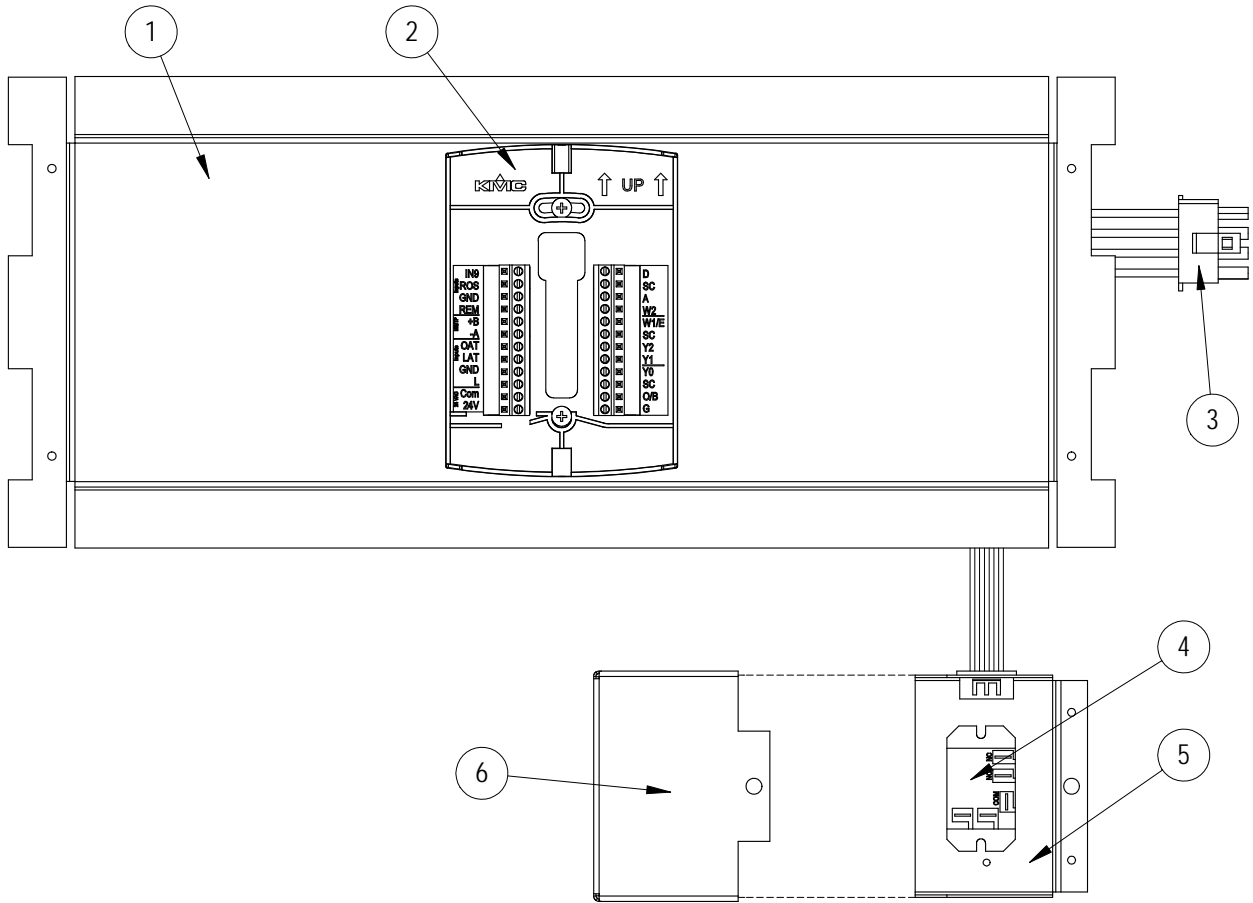


# OPTIONAL CLIMATE CONTROLS

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<b>Drawing No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Option L</b>
1	117-342	Control Panel	X
2	8403-072	Honeywell DDC Interface	X
4	8201-130	Relay, SPDT, Pilot Duty	X
5	3000-1439	12-Pin Male Plug with 8 Wires	X
5	3000-1440	6-Pin Male Plug with 2 Wires	X
5	3000-1441	6-Pin Female Plug with 7 Wires	X
5	3000-1442	6-Pin Male Plug with Sheathed Wire	X
NS	8408-046	20K Discharge Air Sensor	X
NS	8403-067	C02 Controller (Mounted on Door)	X
NS	8403-073	20K Room Temperature Sensor (Mounted on Door)	X

# OPTIONAL CLIMATE CONTROLS



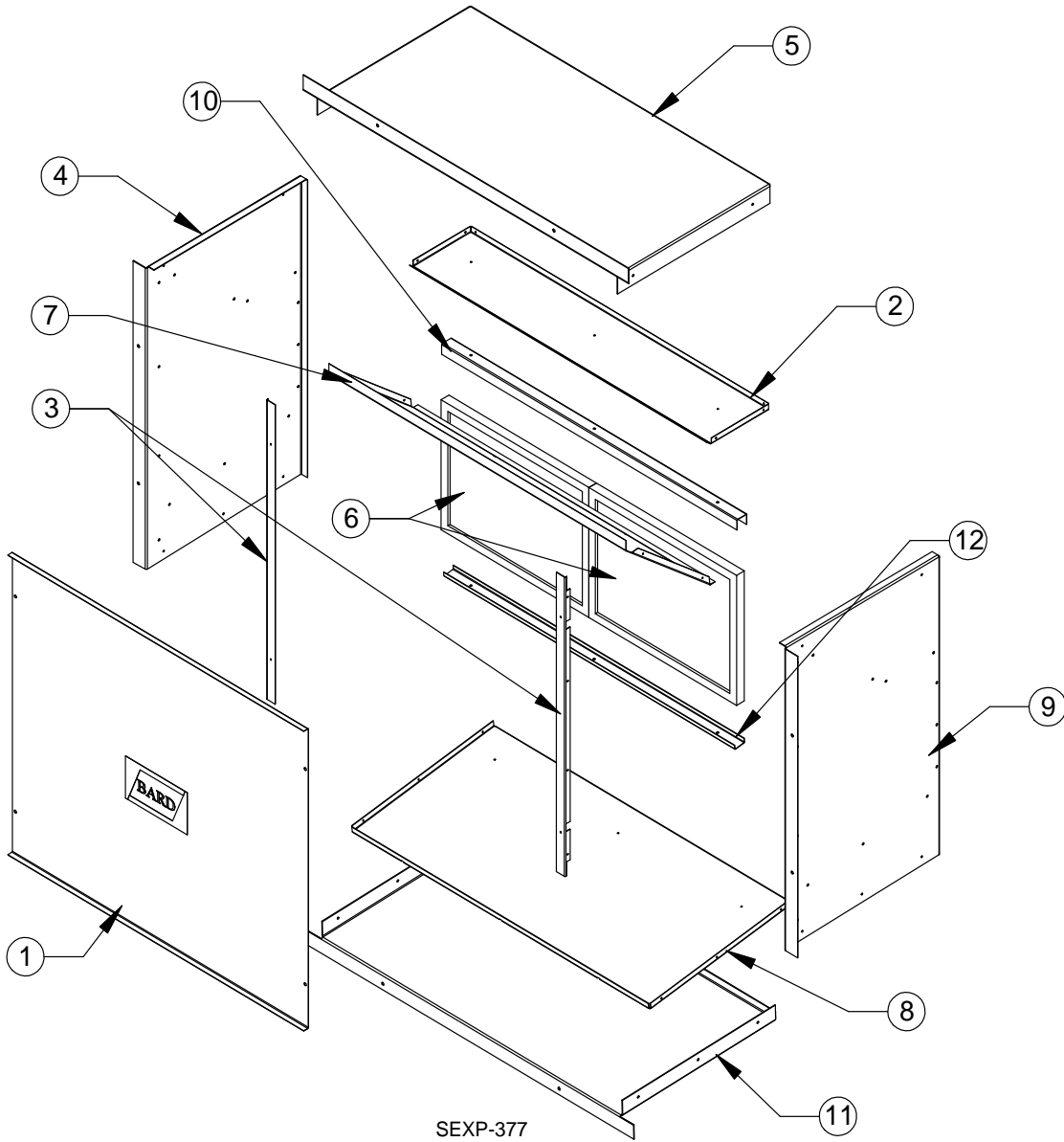
SEXP-645

## OPTIONAL CLIMATE CONTROLS

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Drawing No.	Part No.	Description	Option 1	Option 2	Option 3	Option 4
1	127-427-*	Thermostat Mounting Plate	X	X	X	X
2	CS9B-THO	CompleteStat TEMP/HUM/OCC	X			
2	CS9B-THOC	CompleteStat TEMP/HUM/OCC/CO2		X		
2	CS9BE-THO	CompleteStat TEMP/HUM/OCC with BACnet			X	
2	CS9BE-THOC	CompleteStat TEMP/HUM/OCC/CO2 with BACnet				X
3	3000-1416	Wire Assembly	X	X	X	X
4	8201-130	Relay, SPDT Pilot Duty	X	X	X	X
5	117-330	Relay Box	X	X	X	X
6	133-226	Relay Box Cover	X	X	X	X

# WALL SLEEVE CABINET COMPONENTS



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Drawing No.	Part No.	Description	QWVS42
1	142-076	Cover	X
2	121-350-X	Top Partition	X
3	105-1103-X	Angle	2
4	110-073-X	Left Side	X
5	110-074-X	Top	X
6	7003-056	Mist Eliminator	2
7	111-076-X	Air Deflector	X
8	121-349-X	Partition	X
9	110-072-X	Right Side	X
10	165-566-X	Upper Support Channel	X
11	110-075-X	Base	X
12	165-567-X	Lower Support Channel	X