

# REZNOR®

## INSTALLATION INSTRUCTIONS

FORM RZ-NA-I-XBWS-AQ20  
MAY 29, 2014  
SUPERCEDES 09-27-13  
SXX-2ZERV

### ENERGY RECOVERY VENTILATOR

Applies To Model XBWS When Used With Option AQ20  
Side By Side Design

## INSTALLATION INSTRUCTIONS FOR ROOFTOP STAND ALONE ENERGY RECOVERY UNIT IN SIDE BY SIDE DESIGN



Energy recovery COMPONENT certified to the AHRI Air-to-Air Energy Recovery Ventilation Equipment Certification Program in accordance with AHRI Standard 1060-2000. Actual performance in packaged equipment may vary.



ETL Certified per UL 1995  
and CSA 22.2

### I - Shipping and Packing List

Package contains:

- 1 — Energy Recovery Ventilator Assembly

### II - Shipping Damage

Check unit for shipping damage. Receiving party should contact last carrier immediately if shipping damage is found.

### III - General

These instructions are intended as a general guide and do not supersede local codes in any way. Authorities having jurisdiction should be consulted before installation.

### IV - Requirements

When installed, the unit must be electrically wired and grounded in accordance with local codes or, in absence of local codes, with the current National Electric Code, ANSI/NFPA No. 70.

### V - Application

These Energy Recovery Ventilators (ERV) are used in a down discharge manner equipped with field provided balancing damper assembly through the roof. A roof curb must be provided to Rooftop Systems specifications. These wheels conserve energy by mixing warmer air with cooler air in the following manner:

#### Recovery Wheel Mode

The Recovery Wheel mode is accomplished by two blowers providing continuous exhaust of stale indoor air and replacement by equal amount of outdoor air. Energy recovery is achieved by slowly rotating the energy recovery wheel within the cassette frame work. In winter, the ERV adsorbs heat and moisture from the exhaust air stream during one half of a complete rotation and gives them back to the cold, drier intake air supply during the other half rotation. In summer, the process is automatically reversed. Heat and moisture are absorbed from incoming fresh air supply and transferred to the exhaust air stream. This process allows outdoor air ventilation rates to be increased by factors of three or more without additional energy penalty or increase in size of heating or air conditioning systems.

### VI - Rigging Unit For Lifting

1. Maximum weight of unit is — Varies per Series {300-1200 Lbs.} (Crated)
2. Remove crating.

3. All panels must be in place for rigging.
4. Remove hood assemblies from door marked filter access.
5. Place 2" filter in filter rack and replace filter access door.
6. Roof curb gasket must be applied to all top surfaces of the curb. (Refer to roof curb installation instruction.)
7. Forklift channels must be removed from the base of ERV before setting unit on curb. **See Figure 1.**
8. Position unit on roof curb and provide service access to ERV control access door and wheel.

## ! WARNING



Electric shock hazard. Can cause injury or death. Before attempting to perform any service or maintenance, turn the electrical power to unit OFF at disconnect switch(es). Unit may have multiple power supplies.

## ! CAUTION

Danger of sharp metallic edges. Can cause injury. Take care when servicing unit to avoid accidental contact with sharp edges.

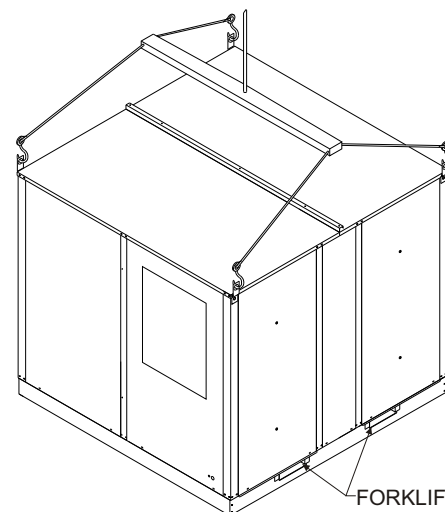


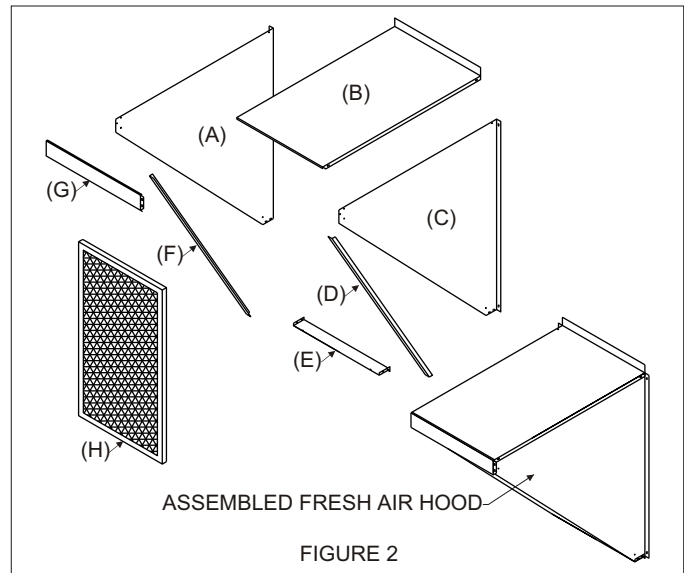
FIGURE 1

FORKLIFT CHANNELS

## VII - Installation

### Fresh Air Hood Assembly (See Figure 2)

1. Secure hood sides (A and C) to Hood top (B) using the supplied #10 x ½ screws.
  2. Secure filter channels (F and D) to hood sides using the supplied #10 x ½ screws.
  3. Secure hood bottom (E) to the inside of the hood sides using the supplied #10 x ½ screws.
  4. Slide the fresh air filter (H) into the tracks created by the front of the hood sides and the filter channels.
  5. Secure the filter panel (G) to the hood sides. Slide the filter panel under the front flange of the hood top.
  6. Install fresh air hood on ERV.
  7. Install barometric exhaust hood over exhaust blower outlet.
  8. Connect field duct connections to duct flanges on back of ERV. Seal duct connections.
  9. Remove ERV control access panel to connect field wiring.
  10. Route class II low voltage wire (3 conductor) from thermostat or energy management through small bushing in end panel of ERV. **See wiring diagram.**
    - a. Thermostat (dependent) - connect in parallel at rooftop unit with "G", "C" and "W". Then connect matching color at terminal 1, 2, and 3 respectively on ERV circuit board.
    - b. Energy Management - provide +24 VAC to "1" and common, 24 VAC to "2" terminals on ERV circuit board.
    - c. Thermostat (dedicated) - splice into +24 vac (blue wire) at (control circuit board) transformer connection run wire to "R" terminal. Then run another wire from "G" terminal to ERV (control circuit board) terminal block #1.
  11. All electrical connections must conform to any local codes and current National Electric Codes (NEC) and Canadian Electric Codes (CEC). Refer closely to unit wiring diagram in unit and/or in these instructions for proper wiring connections.
  12. Refer to the unit nameplate for minimum circuit ampacity (MCA) and maximum overcurrent protection size (fuse).
  13. Electrical data is listed on unit rating plate and motor name plates.
  14. Connect line voltage power supply to ERV fuse block in control box of unit from disconnect switch. **See wiring diagram.**
  15. Ground unit with a suitable ground connection either through unit supply wiring or an earth ground.
- Note: Unit voltage entries must be sealed weather tight after wiring is complete.**
16. Remove motor access panels. Locate belts fastened to blower assembly. Install belt onto motor and blower pulley. Adjust motor sheave to correct blower RPM for CFM and external static pressure requirements. See charts in this instruction. Multiple pulley arrangements are available to meet the entire range.



**Caution: Blower speed must be adjusted for the given external static pressure and airflow (CFM) requirements. If blower speed is not adjusted for conditions, possible motor over loading can occur.**

17. Replace access panel onto the ERV unit and secure.
18. Restore power to unit.
19. Cleanup once unit is operating properly, caulk any open joints, holes or seams to make the units completely air and water tight.
- 20-Leave this instruction manual with owner or in an envelope to be kept near unit.

## VIII - Operation

### How It Works

The unit contains an Energy Recovery Wheel (ERW) that is a new concept in rotary air-to-air heat exchangers. Designed as a packaged unit for ease of installation and maintenance, only the connection of electrical power is required to make the system operational.

When slowly rotating through counter flowing exhaust and fresh air streams the ERW adsorbs sensible heat and latent heat from the warmer air stream and transfer this total energy to the cooler air stream during the second half of its rotating cycle. Rotating at 50-60 revolutions per minute, the wheel provides constant flow of energy from warmer to cooler air stream. The large energy transfer surface and laminar flow through the wheel causes this constant flow of recovered energy to represent up to 85% of the difference in total energy contained within the two air streams.

Sensible and latent heat are the two components of total heat. Sensible heat is energy contained in dry air and latent heat is the energy contained within the moisture of the air. The latent heat load from the outdoor fresh air on an air conditioning system can often be two to three times that of the sensible heat load and in the winter it is a significant part of a humidification heat load.

During both the summer and winter, the ERW transfers moisture entirely in the vapor phase. This eliminates wet surfaces that retain dust and promote fungal growth as well as the need for a condensate pan and drain to carry water.

Because it is constantly rotating when in the air stream, the ERV is always being cleaned by air, first in one direction then the other. Because it is always dry, dust or other particles impinging on the surface during one half cycle, are readily removed during the next half cycle.

During the heating season, when outdoor air temperatures are below 15°F, it is recommended to use the (optional) low ambient kit (field installed).

Low Ambient Kit is appropriate for climates with limited HVAC system operation when outdoor temperatures are below 10°F.

The frost threshold is the outdoor temperature at which frost will begin to form on the ERV wheel. For Energy Recovery Ventilators, the frost threshold is typically below 10°F. Frost threshold is dependent on indoor temperature and humidify. The table shows how the frost threshold temperatures vary depending on indoor conditions

FROST THRESHOLD TEMPERATURE	
INDOOR RH AT 70F	FROST THRESHOLD TEMPERATURE
20%	0F
30%	5F
40%	10F

Because Energy Recovery Ventilators have a low frost threshold, frost control options are not necessary in many climates. Where outdoor temperatures may drop below the frost threshold during the ERV operational hours, exhaust only frost control option is available.

#### Low Ambient Kit (Optional)

Low Ambient Kit turns off the supply blower when outdoor temperatures fall below the frost threshold. The exhaust only thermostat set points are field adjustable. Supply fan operation is automatically restored when the exhaust air temperature rises above the thermostat set point. Provisions for introducing make-up air into the building when the supply blower is off to avoid depressurization should be considered.

#### Recovery Wheel Mode

On a thermostat call for blower operation in heating, cooling or continuous blower, the ERW will rotate between fresh air and exhaust air streams. Both the fresh air and exhaust air blowers will also be operating to overcome the air resistance of the ERV.

#### IX - System Check

1. Disconnect main power.
2. Turn to "Cont" for blower operation on thermostat controlled models.
3. Restore power to unit. Observe ERV wheel rotation and both fresh air and exhaust air blowers will operating.

**Note: If Low ambient kit is used the jumper between TB37-5 & TB37-6 should be removed. Also if system check out is being conducted at low ambient temperatures, technician should be aware that this kit can cause system not to operate.**

4. Verify that the ERV (3) three phase blower motors are phased sequentially ensuring correct rotation and operation.
  - a. Disconnect power.

- b. Reverse any two field power leads to the ERV.
- c. Reapply power.

5. Verify that both blower motors are operating under their full load AMP rating (FLA). The FLA can be found on each motor and the unit nameplate

#### A - Return Damper Settings

Manually adjust position of field installed dampers to balance air flow.

#### B - Air Flow / Blower Speed Adjustment

Blower speed selection is accomplished by changing the sheave setting on both fresh air and exhaust air blowers. To set ERV for the required air flow (CFM), the external static pressure applied to the ERV (duct static) must be known. See the CFM vs External Static Pressure chart for the appropriate unit to determine the correct blower RPM for the specified CFM and External Static Pressure.

After blower speed adjustments have been made. Ensure that when the belt is replaced it is tensioned correctly. The motor mounting plate can be adjusted to tension the belt. If using a belt tension checker, adjust the span to the appropriate setting and check the belt deflection force. The belt deflection force should be between 5-8 lbs or the lowest tension at which the belt will not slip under peak load conditions.

5. Disconnect main power to unit before making adjustment to economizer and/or ERV unit.
6. Replace ERV control access cover.
7. Set thermostat to normal operating position.
8. Restore power to unit.

#### X - Maintenance

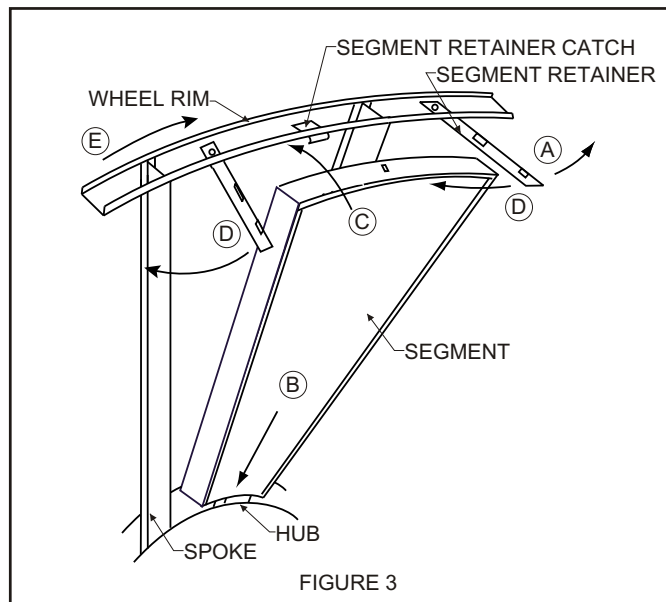
1. All motors use prelubricated sealed bearings; no further lubrication is necessary.
2. Make visual inspection of motors, belts and wheel rotating bearings during routine maintenance.
3. Eight pie-shaped segments, are seated on stops between the segment retainer which pivots on the wheel rim and secured to the hub and rim of wheel. Annual inspection of the self cleaning wheel is recommended. With power disconnected, remove ERV access panels (rear) and unplug [J150 & P150] **(Refer to wiring diagram in this instruction manual)**. Remove segment and wash with water and/or mild detergent.
4. To install wheel segments follow steps A through E . **See Figure 3.** Reverse procedure for segment removal.
  - a. Unlock two segment retainers (one on each side of the selected segment opening).
  - b. With the embedded stiffener facing the motor side, insert the nose of the segment between the hub plates.
  - c. Holding segment by the two outer corners, press the segment towards the center of the wheel and inwards against the spoke flanges. If hand pressure does not fully seat the segment, insert the flat tip of a screw driver between the wheel rim and outer corners of the segment and apply downward force while guiding the segment into place.

- d. Close and latch each segment retainer under segment retaining catch.
- e. Slowly rotate the wheel 180. Install the second segment opposite the first for counterbalance. Rotate the two installed segments 90 to balance the wheel while the third segment is installed. Rotate the wheel 180 again to install the fourth segment opposite the third. Repeat this sequence with the remaining four segments.

### XI - Pulley Kit Installation

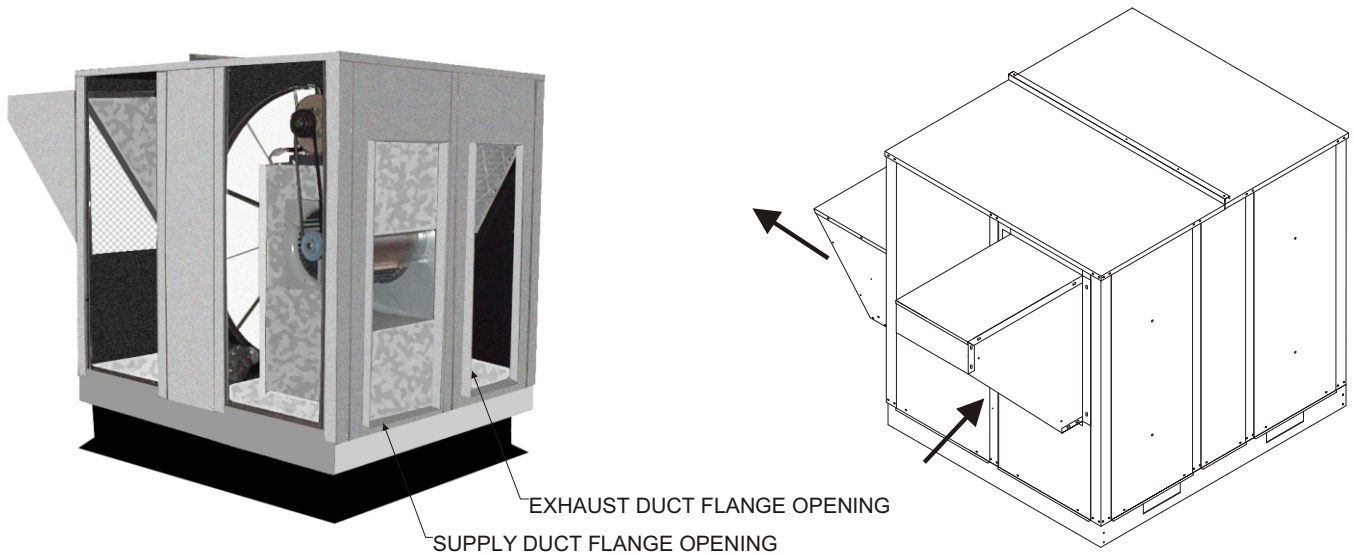
The units are shipped from the factory at the low static setting. Pulley kits are available for the medium and high static settings. To install a pulley kit.

1. Check content of pulley kit, if pulley kit contains:
  - a. An adjustable sheave and a fixed pitch pulley then remove belt and both motor and blower pulley
  - b. An adjustable sheave then remove the motor pulley.
  - c. A fixed pitch pulley then remove the blower pulley.
2. Replace pulley(s) with the pulley(s) from pulley kit. Make sure each pulley is installed with a key. Tighten the set screw on the pulley(s) to 100 in.lb.
3. Install the belt that came with the pulley kit. Tension belt as explained in the blower speed adjustment section.
4. Check the speed of the blower. Adjust the motor sheave to increase or decrease the speed of the blower. See blower adjustment section.





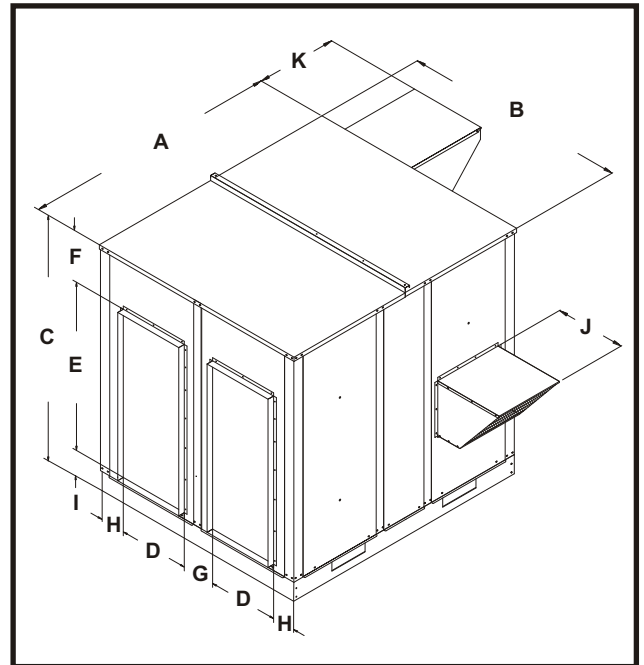
## Stand Alone ERV'S For Side by Side Duct Arrangements



### Features and Notes

1. Stand alone design allows higher levels of outdoor air to be introduced into the a/c space.
2. Static test ports provided to verify intake and exhaust CFM.
3. Balancing damper(s) is field provided when connected to ductwork. System will not operate properly without balancing damper.
4. Roof curbs are available for the ERV's.
5. See blower performance charts for airflow at various E.S.P..
6. Filter rack with 2" pleated filters included.

Roof Curbs (Option Codes)		
Size	14"	24"
11	CJ51-11	CJ52-11
20	CJ51-20	CJ52-20
28	CJ51-28	CJ52-28
36	CJ51-36	CJ52-36
46	CJ51-46	CJ52-46
62	CJ51-62	CJ52-62



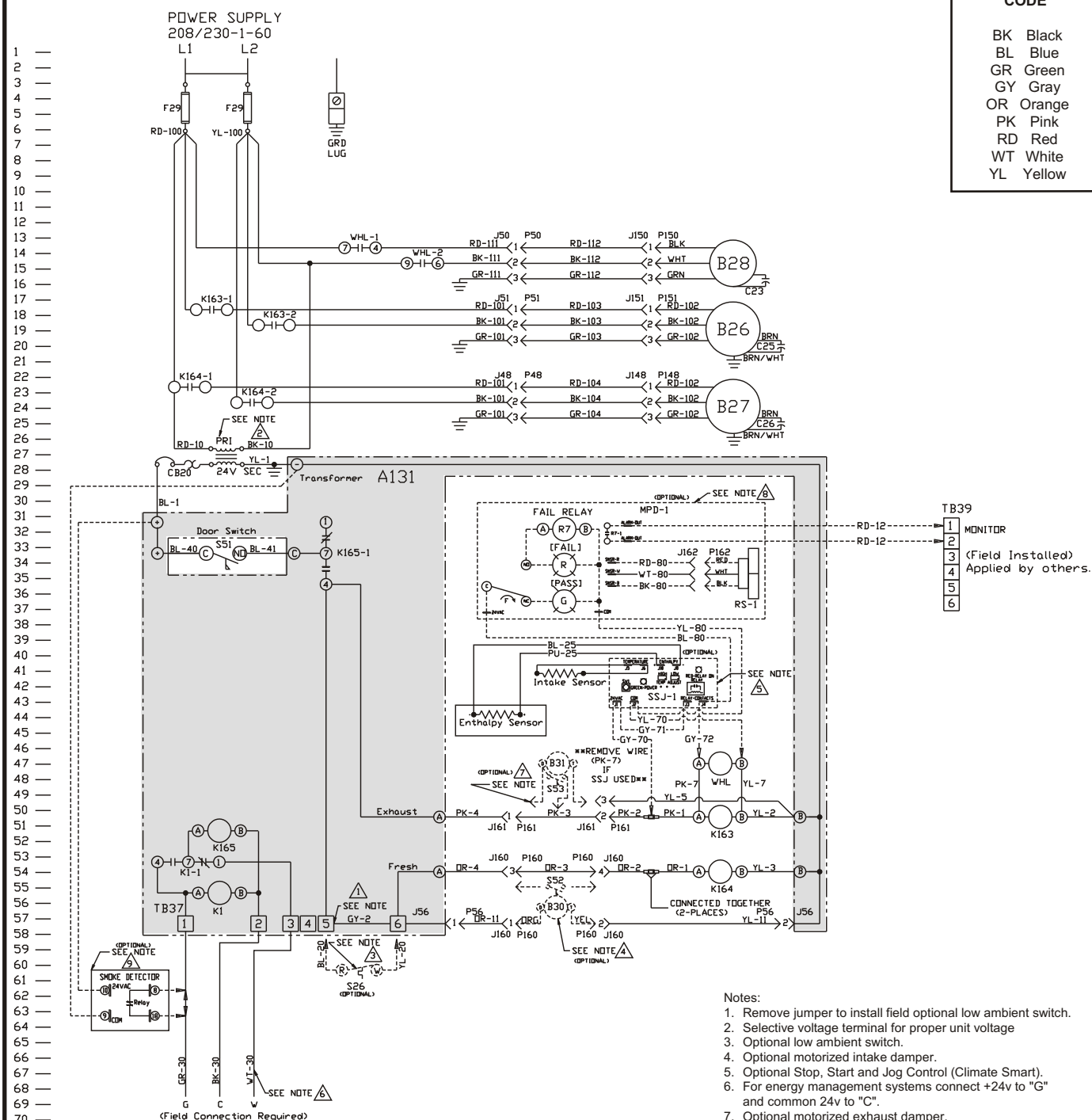
ERV Data		Dimensional Data										
Size	CFM Range	A	B	C	D	E	F	G	H	I	J	K
11	300-1100	44.75	32.13	33.50	11.00	27.00	4.00	4.25	2.88	2.50	20.75	14.38
20	1200-2000	54.38	37.25	37.50	12.00	30.00	1.63	5.13	4.06	1.63	20.75	17.50
28	1200-2800	52.25	42.62	43.56	14.00	32.00	8.69	5.25	4.25	2.88	20.75	25.50
36	2000-3600	60.00	46.69	57.37	16.50	39.50	12.00	5.50	4.05	5.88	20.75	25.50
46	3000-4600	60.00	52.69	57.37	16.50	39.50	12.00	8.69	5.50	5.88	20.75	28.06
62	4600-6200	72.00	70.88	63.63	19.50	39.50	17.53	14.50	8.70	6.60	20.75	37.75

# COMPONENT CODE

A131	Fixed Relay Board	J150	Jack, Wheel Motor Harness	P161	Plug, Damper Exhaust Motor Harness
B26	Motor, Exhaust Air	J151	Jack, Exhaust Air Motor Harness	RS-1	Rotation Sensor (Optional)
B27	Motor, Intake Air	J160	Jack, Damper Intake Motor Harness	S26	Switch, Low Ambient (Optional)
B28	Motor, Desiccant Wheel	J161	Jack, Damper Exhaust Motor Harness	S51	Switch, Door
B30	Motor, Damper Intake (Optional)	K163	Contact, Exhaust Air Motor	S52	Switch, Damper Intake
B31	Motor, Damper Exhaust (Optional)	K164	Contact, Intake Air Motor	S53	Switch, Damper Exhaust
C23	Capacitor, Wheel Motor	MPD-1	Missing Pulse Detector Board (Optional)	SD	Smoke Detector (Optional)
C25	Capacitor, Exhaust Air	P48	Plug, Intake Air Motor Harness	SSJ	Climate Smart Board (Optional)
C26	Capacitor, Intake Air	P50	Plug, Wheel Motor Harness	T27	Transformer, Control
F29	Fuse	P51	Plug, Exhaust Air Motor Harness	T28	Transformer, Step-down (Optional)
J48	Jack, Control Box (Intake Air)	P56	Plug, Damper Motor Harness	TB37	Terminal Block (Low Voltage)
J50	Jack, Control Box (Wheel)	P148	Plug, Intake Air Motor	TB39	Terminal Block (Monitoring)
J51	Jack, Control Box (Exhaust Air)	P150	Plug, Wheel Motor	WHL	Relay, Wheel Motor
J56	Jack, Control Box (Damper)	P151	Plug, Exhaust Air Motor		
J148	Jack, Intake Air Motor Harness	P160	Plug, Damper Intake Motor Harness		

## WIRE COLOR CODE

BK	Black
BL	Blue
GR	Green
GY	Gray
OR	Orange
PK	Pink
RD	Red
WT	White
YL	Yellow

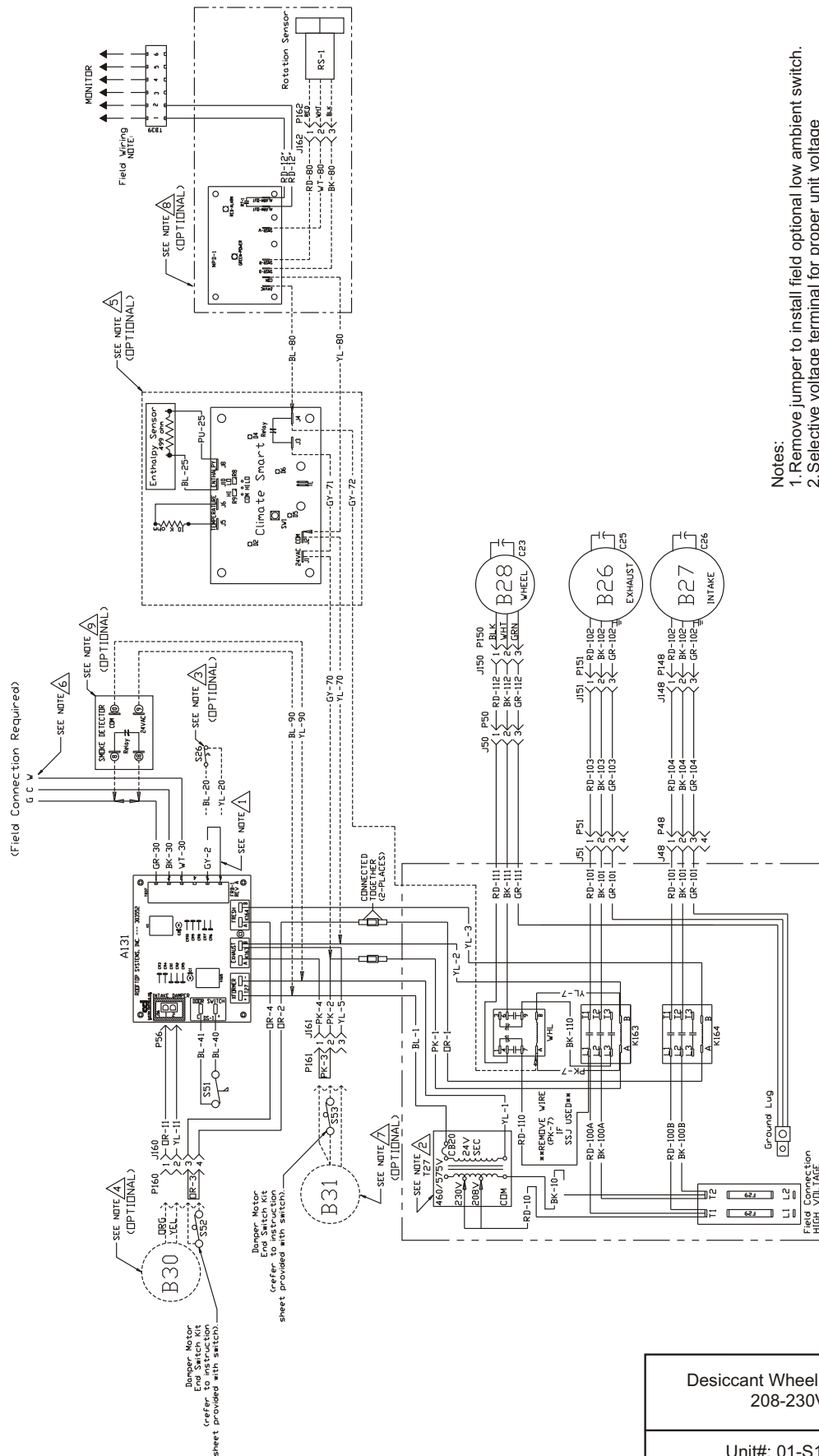


## Notes:

1. Remove jumper to install field optional low ambient switch.
2. Selective voltage terminal for proper unit voltage
3. Optional low ambient switch.
4. Optional motorized intake damper.
5. Optional Stop, Start and Jog Control (Climate Smart).
6. For energy management systems connect +24v to "G" and common 24v to "C".
7. Optional motorized exhaust damper.
8. Optional wheel rotation sensor.
9. Optional smoke detector.

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## ERV UNIT WIRING DIAGRAM



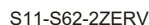
- Notes:
1. Remove jumper to install field optional low ambient switch.
2. Selective voltage terminal for proper unit voltage
3. Optional low ambient switch.
4. Optional motorized intake damper.
5. Optional Stop, Start and Jog Control (Climate Smart).
6. For energy management systems connect +24v to "G" and common 24v to "C"
7. Optional motorized exhaust damper.
8. Optional wheel rotation sensor.
9. Optional smoke detector.

Desiccant Wheel for Rooftop Unit  
208-230V (1 PH)

Unit#: 01-S11-02XX-21

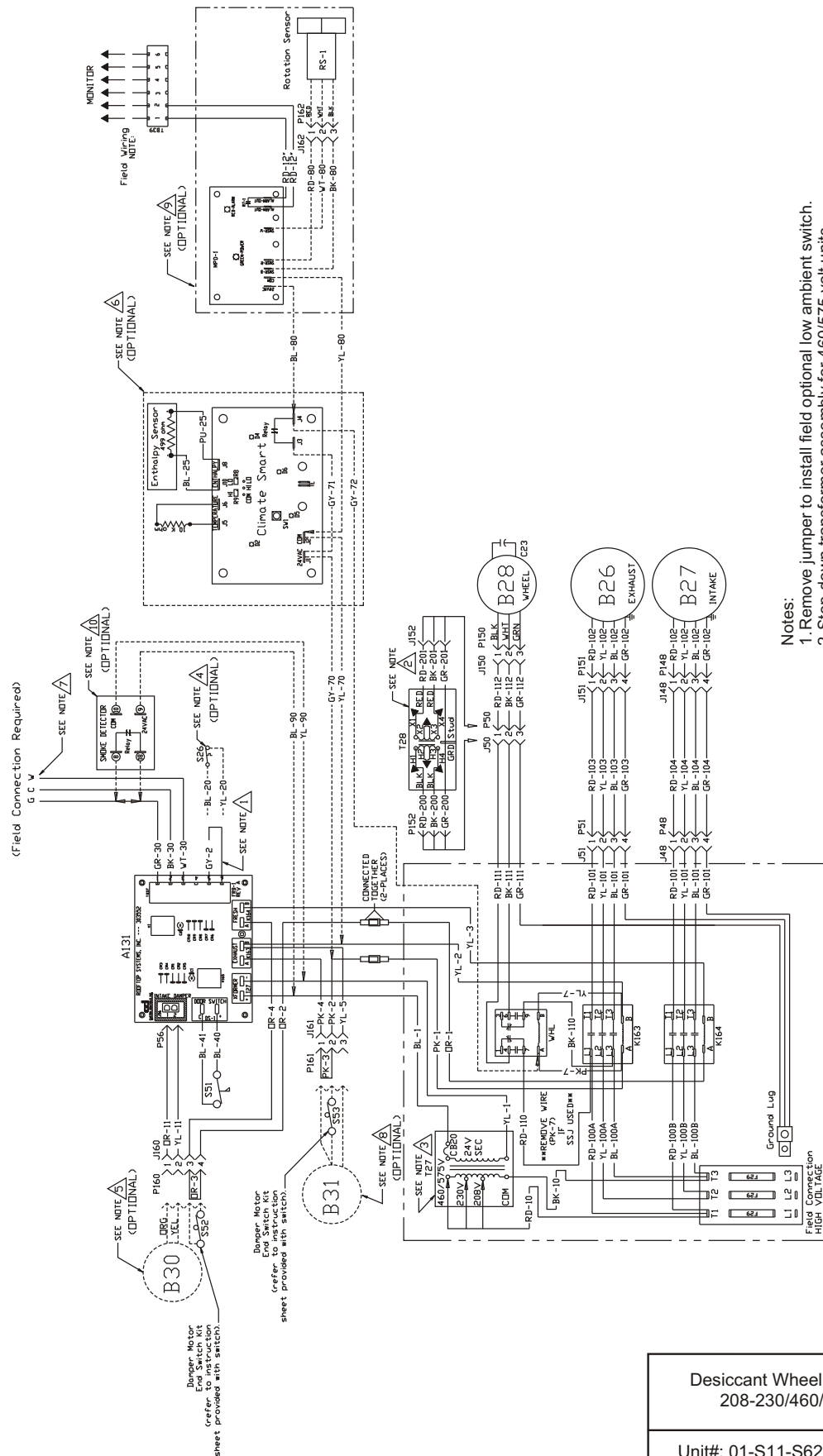
A131	Fixed Relay Board	J152	Jack, Transformer (High Voltage)	P161	Plug, Damper Exhaust Motor Harness
B26	Motor, Exhaust Air	J160	Jack, Damper Intake Motor Harness	RS-1	Rotation Sensor (Optional)
B27	Motor, Intake Air	J161	Jack, Damper Exhaust Motor Harness	S26	Switch, Low Ambient (Optional)
B28	Motor, Desiccant Wheel	K163	Contact, Exhaust Air Motor	S51	Switch, Door
B30	Motor, Damper Intake (Optional)	K164	Contact, Intake Air Motor	S52	Switch, Damper Intake
B31	Motor, Damper Exhaust (Optional)	MPD-1	Missing Pulse Detector Board (Optional)	S53	Switch, Damper Exhaust
C23	Capacitor, Wheel Motor	P48	Plug, Intake Air Motor Harness	SD	Smoke Detector (Optional)
F29	Fuse	P50	Plug, Wheel Motor Harness	SSJ	Climate Smart Board (Optional)
J48	Jack, Control Box (Intake Air)	P51	Plug, Exhaust Air Motor Harness	T27	Transformer, Control
J50	Jack, Control Box (Wheel)	P56	Plug, Damper Motor Harness	T28	Transformer, Step-down (Optional)
J51	Jack, Control Box (Exhaust Air)	P148	Plug, Intake Air Motor	TB37	Terminal Block (Low Voltage)
J56	Jack, Control Box (Damper)	P150	Plug, Wheel Motor	TB39	Terminal Block (Monitoring)
J148	Jack, Intake Air Motor Harness	P151	Plug, Exhaust Air Motor	WHL	Relay, Wheel Motor
J150	Jack, Wheel Motor Harness	P152	Plug, Transformer (High Voltage)		
J151	Jack, Exhaust Air Motor Harness	P160	Plug, Damper Intake Motor Harness		

BK	Black
BL	Blue
GR	Green
GY	Gray
OR	Orange
PK	Pink
RD	Red
WT	White
YL	Yellow





## ERV UNIT WIRING DIAGRAM



- Notes:
1. Remove jumper to install field optional low ambient switch.
  2. Step-down transformer assembly for 460/575 volt units.
  3. Selective voltage terminal for proper unit voltage
  4. Optional low ambient switch.
  5. Optional motorized intake damper.
  6. Optional Stop, Start and Jog Control (Climate Smart).
  7. For energy management systems connect +24v to "G" and common 24v to "C".
  8. Optional motorized exhaust damper.
  9. Optional wheel rotation sensor.
  10. Optional smoke detector.

Desiccant Wheel for Rooftop Unit  
208-230/460/575V (3 PH)

Unit#: 01-S11-S62-02XX-23 thru -43

## Blower RPM for XBWS11-AQ20

### SUPPLY




Mist Eliminator Filter in Intake Hood (1.5HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	300	N/A	N/A	1020	1205	1365	1480	1590
	500	N/A	1015	1200	1320	1460	1565	1670
	700	990	1190	1315	1455	1560	1665	1715
	900	1150	1310	1450	1555	1660	1680	1795
	1100	1305	1440	1550	1655	1740	1815	1895

### EXHAUST

Barometric Hood, 2" Pleated Filters (1.5HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	300	N/A	N/A	1150	1285	1415	1515	1640
	500	N/A	1145	1275	1410	1510	1545	1720
	700	1140	1270	1405	1505	1590	1715	1815
	900	1320	1435	1585	1665	1705	1810	1930
	1100	1495	1580	1660	1755	1880	N/A	N/A

#### Notes:

1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only

RPM Range			
	Low	1000-1300	Standard Unit
	Medium	1300-1700	Optional Kit
	High	1750-2200	Optional Kit

## Blower RPM for XBWS20-AQ20

### SUPPLY




Mist Eliminator Filter in Intake Hood (2HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	1200	1065	1285	1375	1415	1495	1580	1685
	1400	1140	1330	1410	1440	1555	1660	1760
	1600	1290	1400	1480	1545	1670	1745	1835
	1800	1395	1470	1540	1665	1735	1800	1880
	2000	1460	1530	1650	1725	1795	1870	1960

### EXHAUST

Barometric Hood, 2" Pleated Filters (2HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	1200	1175	1290	1430	1520	1680	1765	1850
	1400	1245	1425	1515	1675	1755	1830	1920
	1600	1400	1505	1670	1750	1825	1910	1980
	1800	1495	1660	1740	1820	1900	1975	2090
	2000	1645	1730	1815	1895	1965	2080	2170

#### Notes:

1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only

RPM Range			
	Low	1000-1300	Standard Unit
	Medium	1300-1750	Optional Kit
	High	1750-2200	Optional Kit

## Blower RPM for XBWS28-AQ20

### SUPPLY

Mist Eliminator Filter in Intake Hood (3HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	1200	N/A	955	1070	1210	1370	1465	1550
	1600	N/A	1065	1205	1305	1460	1540	1595
	2000	1060	1200	1290	1445	1530	1585	1680
	2400	1190	1335	1440	1490	1575	1670	1755
	2800	1300	1460	1550	1645	1705	1750	1800

### EXHAUST

Barometric Hood, 2" Pleated Filters (3HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	1200	N/A	N/A	1025	1170	1270	1355	1400
	1600	N/A	1020	1155	1240	1330	1390	1490
	2000	1015	1150	1235	1325	1380	1475	1590
	2400	1140	1285	1365	1420	1510	1595	1640
	2800	1280	1345	1455	1540	1575	1670	1745

#### Notes:

1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only



#### RPM Range

Low	950-1320	Standard Unit
Medium	1325-1565	Optional Kit
High	1570-1880	Optional Kit

## Blower RPM for XBWS36-AQ20

### SUPPLY

Mist Eliminator Filter in Intake Hood (3HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	2000	815	925	1020	1105	1155	1255	1325
	2400	920	1060	1130	1215	1250	1355	1385
	2800	1010	1140	1240	1285	1370	1425	1470
	3200	1125	1235	1340	1385	1455	1465	N/A
	3600	1225	1375	1440	1460	1500	N/A	N/A

### EXHAUST

Barometric Hood, 2" Pleated Filters (3HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	2000	755	890	970	1060	1125	1215	1280
	2400	985	1035	1085	1140	1240	1275	1325
	2800	1020	1115	1175	1230	1270	1335	1370
	3200	1105	1200	1225	1285	1300	1390	1430
	3600	1155	1265	1295	1335	1385	N/A	N/A

#### Notes:

1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only



#### RPM Range

Low	700-1025	Standard Unit
Medium	1030-1305	Optional Kit
High	1325-1575	Optional Kit

## Blower RPM for XBWS46-AQ20

### SUPPLY

Mist Eliminator Filter in Intake Hood (5HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	3000	965	1085	1150	1230	1295	1345	1420
	3400	1035	1145	1250	1290	1335	1415	1475
	3800	1120	1245	1285	1315	1440	1470	1535
	4200	1215	1305	1355	1430	1465	1530	1595
	4600	1300	1375	1450	1460	1540	1590	1650

### EXHAUST

Barometric Hood, 2" Pleated Filters (5HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	3000	1010	1105	1195	1255	1300	1375	1415
	3400	1100	1190	1250	1320	1370	1410	1480
	3800	1185	1245	1360	1410	1440	1475	1540
	4200	1240	1355	1425	1465	1530	1590	1630
	4600	1345	1410	1485	1520	1585	1650	1700

Notes:

1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only



#### RPM Range

Low	780-1020	Standard Unit
Medium	1000-1315	Optional Kit
High	1315-1700	Optional Kit

## Blower RPM for XBW62S-AQ20

### SUPPLY

Mist Eliminator Filter in Intake Hood (5HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	4600	795	900	1030	1075	1160	1220	1255
	5000	855	920	1070	1130	1190	1250	1275
	5400	880	950	1095	1155	1245	1270	1290
	5800	915	1035	1115	1175	1255	1280	N/A
	6200	985	1080	1135	1225	1265	N/A	N/A

### EXHAUST

Barometric Hood, 2" Pleated Filters (5HP)								
		External Static Pressure (in water)						
		0	0.25	0.5	0.75	1	1.25	1.5
CFM	4600	705	885	985	1045	1100	1155	1215
	5000	825	950	1025	1095	1150	1210	1245
	5400	875	980	1080	1140	1190	1240	1275
	5800	935	995	1130	1180	1230	N/A	N/A
	6200	985	1095	1165	N/A	N/A	N/A	N/A

Notes:

1. Drive losses included in the above tables.
2. Performance can vary depending on ambient conditions
3. Blower RPMs are for reference only



#### RPM Range

Low	700-900	Standard Unit
Medium	900-1100	Optional Kit
High	1100-1300	Optional Kit









## START UP INFORMATION SHEET

### VOLTAGE - ERV UNIT

Incoming Voltage L1-L2 \_\_\_\_\_ L1-L3 \_\_\_\_\_ L2-L3 \_\_\_\_\_  
Running Voltage L1-L2 \_\_\_\_\_ L 1-L3 \_\_\_\_\_ L2-L3 \_\_\_\_\_  
Secondary Voltage \_\_\_\_\_ C (black) to G (green) Volts\* \_\_\_\_\_  
C (black) to W (white) Volts\* \_\_\_\_\_

\* With thermostat calling.

### AMPERAGE - ERV MOTORS

Intake Motor: Nominal HP \_\_\_\_\_ Rated Amps \_\_\_\_\_ Running Amps \_\_\_\_\_  
Exhaust Motor: Nominal HP \_\_\_\_\_ Rated Amps \_\_\_\_\_ Running Amps \_\_\_\_\_  
Wheel Motor: Nominal HP \_\_\_\_\_ Rated Amps \_\_\_\_\_ Running Amps \_\_\_\_\_

### AIRFLOW

Intake Design CFM \_\_\_\_\_ Pressure Drop \_\_\_\_\_ Calculated CFM \_\_\_\_\_  
Exhaust Design CFM \_\_\_\_\_ Pressure Drop \_\_\_\_\_ Calculated CFM \_\_\_\_\_  
Amb. db Temp \_\_\_\_\_ Return Air db Temp\* \_\_\_\_\_ Tempered Air db Temp\* \_\_\_\_\_  
Amb. wb Temp \_\_\_\_\_ Return Air wb Temp\* \_\_\_\_\_ Tempered Air wbTemp\* \_\_\_\_\_

\* Measure after 15 minutes of run time

## INSTALLATION CHECK LIST

ERV Model # \_\_\_\_\_ Serial # \_\_\_\_\_  
Owner \_\_\_\_\_ Owner Phone # \_\_\_\_\_  
Owner Address \_\_\_\_\_  
Installing Contractor \_\_\_\_\_ Start Up Mechanic \_\_\_\_\_

- ☐ Inspect the unit for transit damage and report any damage on the carrier's freight bill.
- ☐ Check model number to insure it matches the job requirements.
- ☐ Install field accessories and unit adapter panels as required. Follow accessory and unit installation manuals.
- ☐ Verify field wiring, including the wiring to any accessories.
- ☐ Check all multi-tap transformers, to insure they are set to the proper incoming voltage.
- ☐ Verify correct belt tension, as well as the belt/pulley alignment. Tighten if needed.
- ☐ Prior to energizing the unit, inspect all the electrical connections.
- ☐ Power the unit. Bump the motor contactor to check rotation. Three phase motors are synchronized at the factory. If blower motor fans are running backwards, de-energize power to the unit, then swap two of the three incoming electrical lines to obtain proper phasing. Re-check.
- ☐ Perform all start up procedures outlined in the installation manual shipped with the unit.
- ☐ Fill in the Start Up Information as outlined on the opposite side of this sheet.
- ☐ Provide owner with information packet. Explain the thermostat and unit operation.

# REZNOR®

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