Installation, Operation, and Maintenance Manual

2026

H3 and V3 Series Startup Forms

Horizontal & Vertical Indoor Air Handling Units

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Table 1: H3 Series A Cabinet Unit Filters

Feature 6B	Qty. Size (cm) [in.]	Type
0	No Pre Filters	
A	(1) 40.6 x 63.5 x 5.1 [16 x 25 x 2]	Pleated MERV 8
B	(1) 40.6 x 63.5 x 10.2 [16 x 25 x 4]	Pleated MERV 8
C		Pleated MERV 11
D		Pleated MERV 13
E		Pleated MERV 14
F	(1) 40.6 x 63.5 x 5.1 and (1) 40.6 x 63.5 x 10.2 [16 x 25 x 2 and 16 x 25 x 4]	Pleated MERV 8 and Pleated MERV 8
G		Pleated MERV 8 and Pleated MERV 11
H		Pleated MERV 8 and Pleated MERV 13
J		Pleated MERV 8 and Pleated MERV 14

Table 2: H3 Series B Cabinet Unit Filters

Feature 6B	Qty. Size (cm) [in.]	Type
0	No Pre Filters	
A	(2) 40.6 x 50.8 x 5.1 [16 x 20 x 2]	Pleated MERV 8
B	(2) 40.6 x 50.8 x 10.2 [16 x 20 x 4]	Pleated MERV 8
C		Pleated MERV 11
D		Pleated MERV 13
E		Pleated MERV 14
F	(2) 40.6 x 50.8 x 5.1 and (2) 40.6 x 50.8 x 10.2 [16 x 20 x 2 and16 x 20 x 4]	Pleated MERV 8 and Pleated MERV 8
G		Pleated MERV 8 and Pleated MERV 11
H		Pleated MERV 8 and Pleated MERV 13
J		Pleated MERV 8 and Pleated MERV 14

Table 3: H3 Series C Cabinet Unit Filters

Feature 6B	Qty. Size (cm) [in.]	Type
0	No Pre Filters	
A	(2) 50.8 x 50.8 x 5.1 and (1) 40.6 x 50.8 x 5.1 [20 x 20 x 2 and 16 x 20 x 2]	Pleated MERV 8
B	(2) 50.8 x 50.8 x 10.2 and (1) 40.6 x 50.8 x 10.2 [20 x 20 x 4 and 16 x 20 x 4]	Pleated MERV 8
C		Pleated MERV 11
D		Pleated MERV 13
E		Pleated MERV 14
F	(2) 50.8 x 50.8 x 5.1 and (1) 40.6 x 50.8 x 5.1 and (2) 50.8 x 50.8 x 10.2 and (1) 40.6 x 50.8 x 10.2 [20 x 20 x 2 and 16 x 20 x 2] and [20 x 20 x 4 and 16 x 20 x 4]	Pleated MERV 8 and Pleated MERV 8
G		Pleated MERV 8 and Pleated MERV 11
H		Pleated MERV 8 and Pleated MERV 13
J		Pleated MERV 8 and Pleated MERV 14

Table 4: H3 Series D Cabinet Unit Filters

Feature 6B	Qty. Size (cm) [in.]	Type
0	No Pre Filters	
A	(1) 50.8 x 50.8 x 5.1 and (4) 40.6 x 50.8 x 5.1 [20 x 20 x 2 and 16 x 20 x 2]	Pleated MERV 8
B	(1) 50.8 x 50.8 x 10.2 and (4) 40.6 x 50.8 x 10.2 [20 x 20 x 4 and 16 x 20 x 4]	Pleated MERV 8
C		Pleated MERV 11
D		Pleated MERV 13
E		Pleated MERV 14
F	(1) 50.8 x 50.8 x 5.1 and (4) 40.6 x 50.8 x 5.1 and (1) 50.8 x 50.8 x 10.2 and (4) 40.6 x 50.8 x 10.2 [20 x 20 x 2 and 16 x 20 x 2] and [20 x 20 x 4 and 16 x 20 x 4]	Pleated MERV 8 and Pleated MERV 8
G		Pleated MERV 8 and Pleated MERV 11
H		Pleated MERV 8 and Pleated MERV 13
J		Pleated MERV 8 and Pleated MERV 14

Table 5: H3 Series E Cabinet Unit Filters

Feature 6B	Qty. Size (cm) [in.]	Type
0	No Pre Filters	
A	(6) 40.6 x 63.5 x 5.1 [16 x 25 x 2]	Pleated MERV 8
B	(6) 40.6 x 63.5 x 10.2 [16 x 25 x 4]	Pleated MERV 8
C		Pleated MERV 11
D		Pleated MERV 13
E		Pleated MERV 14
F	(6) 40.6 x 63.5 x 5.1 and (6) 40.6 x 63.5 x 10.2 [16 x 25 x 2 and 16 x 25 x 4]	Pleated MERV 8 and Pleated MERV 8
G		Pleated MERV 8 and Pleated MERV 11
H		Pleated MERV 8 and Pleated MERV 13
J		Pleated MERV 8 and Pleated MERV 14

Table 6: H3 Series A Cabinet Final Filters

Feature 6C	Qty. Size (cm) [in.]	Type
0	No Final Filters	
A	(1) 40.6 x 63.5 x 5.1 [16 x 25 x 2]	Pleated MERV 8
B	(1) 40.6 x 63.5 x 30.5 [16 x 25 x 12]	Cartridge MERV 11
C		Cartridge MERV 13
D		Cartridge MERV 14
E	(1) 40.6 x 63.5 x 5.1 and 40.6 x 63.5 x 30.5 [16 x 25 x 2 and 16 x 25 x 12]	Pleated MERV 8 and Cartridge MERV 11
F		Pleated MERV 8 and Cartridge MERV 13
G		Pleated MERV 8 and Cartridge MERV 14

Table 7: H3 Series B Cabinet Final Filters

Feature 6C	Qty. Size (cm) [in.]	Type
0	No Final Filters	
A	(2) 40.6 x 50.8 x 5.1 [16 x 20 x 2]	Pleated MERV 8
B	(2) 40.6 x 50.8 x 30.5 [16 x 20 x 12]	Cartridge MERV 11
C		Cartridge MERV 13
D		Cartridge MERV 14
E	(2) 40.6 x 50.8 x 5.1 and (2) 40.6 x 50.8 x 30.5 [16 x 20 x 2 and 16 x 20 x 12]	Pleated MERV 8 and Cartridge MERV 11
F		Pleated MERV 8 and Cartridge MERV 13
G		Pleated MERV 8 and Cartridge MERV 14

Table 8: H3 Series C Cabinet Final Filters

Feature 6C	Qty. Size (cm) [in.]	Type
0	No Final Filters	
A	(2) 50.8 x 50.8 x 5.1 and (1) 40.6 x 50.8 x 5.1 [20 x 20 x 2 and 16 x 20 x 2]	Pleated MERV 8
B	(2) 50.8 x 50.8 x 30.5 and (1) 40.6 x 50.8 x 30.5 [20 x 20 x12 and 16 x 20 x 12]	Cartridge MERV 11
C		Cartridge MERV 13
D		Cartridge MERV 14
E	(2) 50.8 x 50.8 x 5.1 and (1) 40.6 x 50.8 x 5.1 and (2) 50.8 x 50.8 x 30.5 and (1) 40.6 x 50.8 x 30.5 [20 x 20 x 2 and 16 x 20 x 2] and [20 x 20 x12 and 16 x 20 x 12]	Pleated MERV 8 and Cartridge MERV 11
F		Pleated MERV 8 and Cartridge MERV 13
G		Pleated MERV 8 and Cartridge MERV 14

Table 9: H3 Series D Cabinet Final Filters

Feature 6C	Qty. Size (cm) [in.]	Type
0	No Final Filters	
A	(4) 50.8 x 50.8 x 5.1 [20 x 20 x 2]	Pleated MERV 8
B	(4) 50.8 x 50.8 x 30.5 [20 x 20 x 12]	Cartridge MERV 11
C		Cartridge MERV 13
D		Cartridge MERV 14
E	(4) 50.8 x 50.8 x 5.1 and (4) 50.8 x 50.8 x 30.5 [20 x 20 x 2 and 20 x 20 x 12]	Pleated MERV 8 and Cartridge MERV 11
F		Pleated MERV 8 and Cartridge MERV 13
G		Pleated MERV 8 and Cartridge MERV 14

Table 10: H3 Series E Cabinet Final Filters

Feature 6C	Qty. Size (cm) [in.]	Type
0	No Final Filters	
A	(6) 40.6 x 63.5 x 5.1 [16 x 25 x 2]	Pleated MERV 8
B	(6) 40.6 x 63.5 x 30.5 [16 x 25 x 12]	Cartridge MERV 11
C		Cartridge MERV 13
D		Cartridge MERV 14
E	(6) 40.6 x 63.5 x 5.1 and (6) 40.6 x 63.5 x 30.5 [16 x 25 x 2 and 16 x 25 x 12]	Pleated MERV 8 and Cartridge MERV 11
F		Pleated MERV 8 and Cartridge MERV 13
G		Pleated MERV 8 and Cartridge MERV 14

Table 11: H3 Series Energy Recovery OA Filters (Feature 13 ≠ 0)

Unit Size	Qty. Size (cm) [in.]	Type
A	(1) 70 x 30.5 x 5.1 [24 x 12 x 2]	Pleated MERV 8
B	(1) 50.8 x 63.5 x 5.1 [20 x 25 x 2]	Pleated MERV 8
C	(2) 70 x 70 x 5.1 [24 x 24 x 2]	Pleated MERV 8
D	(4) 40.6 x 50.8 x 5.1 (1) 50.8 x 50.8 x 5.1 [16 x 20 x 2] [20 x 20 x 2]	Pleated MERV 8
E	(6) 40.6 x 63.5 x 5.1 [16 x 25 x 2]	Pleated MERV 8

Table 12: H3 Series Energy Recovery RA Filters (Feature 13 ≠ 0)

Unit Size	Qty. Size (cm) [in.]	Type
A	(1) 40.6 x 50.8 x 5.1 [16 x 20 x 2]	Pleated MERV 8
B	(1) 50.8 x 63.5 x 5.1 [20 x 25 x 2]	Pleated MERV 8
C	(2) 50.8 x 63.5 x 5.1 [20 x 25 x 2]	Pleated MERV 8
D	(4) 40.6 x 50.8 x 5.1 (1) 50.8 x 50.8 x 5.1 [16 x 20 x 2] [20 x 20 x 2]	Pleated MERV 8
E	(6) 40.6 x 63.5 x 5.1 [16 x 25 x 2]	Pleated MERV 8

Table 13: V3 Series A Cabinet Unit Filters

Feature 6B	Qty. Size (cm) [in.]	Type
0	No Pre Filters	
A	(1) 40.6 x 63.5 x 5.1 [16 x 25 x 2]	Pleated MERV 8
B	(1) 40.6 x 63.5 x 10.2 [16 x 25 x 4]	Pleated MERV 8
C		Pleated MERV 11
D		Pleated MERV 13
E		Pleated MERV 14
F	(1) 40.6 x 63.5 x 5.1 and (1) 40.6 x 63.5 x 10.2 [16 x 25 x 2 and 16 x 25 x 4]	Pleated MERV 8 and Pleated MERV 8
G		Pleated MERV 8 and Pleated MERV 11
H		Pleated MERV 8 and Pleated MERV 13
J		Pleated MERV 8 and Pleated MERV 14

Table 14: V3 Series B Cabinet Unit Filters

Feature 6B	Qty. Size (cm) [in.]	Type
0	No Pre Filters	
A	(1) 61 x 61 x 5.1 [24 x 24 x 2]	Pleated MERV 8
B	(1) 61 x 61 x 10.2 [24 x 24 x 4]	Pleated MERV 8
C		Pleated MERV 11
D		Pleated MERV 13
E		Pleated MERV 14
F	(1) 61 x 61 x 5.1 and (1) 61 x 61 x 10.2 [24 x 24 x 2 and 24 x 24 x 4]	Pleated MERV 8 and Pleated MERV 8
G		Pleated MERV 8 and Pleated MERV 11
H		Pleated MERV 8 and Pleated MERV 13
J		Pleated MERV 8 and Pleated MERV 14

Table 15: V3 Series C Cabinet Unit Filters

Feature 6B	Qty. Size (cm) [in.]	Type
0	No Pre Filters	
A	(4) 40.6 x 50.8 x 5.1 [16 x 20 x 2]	Pleated MERV 8
B	(4) 40.6 x 50.8 x 10.2 [16 x 20 x 4]	Pleated MERV 8
C		Pleated MERV 11
D		Pleated MERV 13
E		Pleated MERV 14
F	(4) 40.6 x 50.8 x 5.1 and (4) 40.6 x 50.8 x 10.2 [16 x 20 x 2 and16 x 20 x 4]	Pleated MERV 8 and Pleated MERV 8
G		Pleated MERV 8 and Pleated MERV 11
H		Pleated MERV 8 and Pleated MERV 13
J		Pleated MERV 8 and Pleated MERV 14

Table 16: V3 Series D Cabinet Unit Filters

Feature 6B	(Qty.) Size (cm) [in.]	Type
0	No Unit Filters	
A	(4) 45.7 x 61 x 5.1 [18 x 24 x 2]	Pleated, MERV 8
B	(4) 45.7 x 61 x 10.2 [18 x 24 x 4]	Pleated, MERV 8
C		Pleated, MERV 11
D		Pleated, MERV 13
E		Pleated, MERV 14
F	(4) 45.7 x 61 x 5.1 and (4) 45.7 x 61 x 10.2 [18 x 24 x 2 and 18 x 24 x 4]	Pleated, MERV 8 and Pleated, MERV 8
G		Pleated, MERV 8 and Pleated, MERV 11
H		Pleated, MERV 8 and Pleated, MERV 13
J		Pleated, MERV 8 and Pleated, MERV 14

Table 17: V3 Series E Cabinet Unit Filters

Feature 6A	(Qty.) Size (cm) [in.]	Type
0	No Unit Filters	
A	(6) 45.7 x 61 x 5.1 [18 x 24 x 2]	Pleated, MERV 8
B	(6) 45.7 x 61 x 10.2 [18 x 24 x 4]	Pleated, MERV 8
C		Pleated, MERV 11
D		Pleated, MERV 13
E		Pleated, MERV 14
F	(6) 45.7 x 61 x 5.1 and (6) 45.7 x 61 x 10.2 [18 x 24 x 2 and 18 x 24 x 4]	Pleated, MERV 8 and Pleated, MERV 8
G		Pleated, MERV 8 and Pleated, MERV 11
H		Pleated, MERV 8 and Pleated, MERV 13
J		Pleated, MERV 8 and Pleated, MERV 14

Table 18: V3 Series A Cabinet Final Filters

Feature 6C	(Qty.) Size (cm) [in.]	Type
0	No Final Filters	
H	(1) 40.6 x 63.5 x 10.2 [16 x 25 x 4]	Pleated, MERV 8
J		Pleated, MERV 11
K		Pleated, MERV 13
L		Pleated, MERV 14

Table 19: V3 Series B Cabinet Final Filters

Feature 6C	(Quantity) Size	Type
0	No Final Filters	
H	(1) 61 x 61 x 10.2 [24 x 24 x 4]	Pleated, MERV 8
J		Pleated, MERV 11
K		Pleated, MERV 13
L		Pleated, MERV 14

Table 20: V3 Series C Cabinet Final Filters

Feature 6C	(Qty.) Size (cm) [in.]	Type
0	No Final Filters	
H	(2) 50.8 x 63.5 x 10.2 [20 x 25 x 4]	Pleated, MERV 8
J		Pleated, MERV 11
K		Pleated, MERV 13
L		Pleated, MERV 14

Table 21: V3 Series Energy Recovery OA Filters (Feature 13 = A-V)

Unit Size	Qty. Size (cm) [in.]	Type
A	(1) 40.6 x 63.5 x 5.1 [16 x 25 x 2]	Pleated MERV 8
B	(1) 61 x 61 x 5.1 [24 x 24 x 2]	Pleated MERV 8
C	(4) 40.6 x 50.8 x 5.1 [16 x 20 x 2]	Pleated MERV 8
D	(4) 45.7 x 61 x 5.1 [18 x 24 x 2]	Pleated, MERV 8
E	(8) 40.6 x 50.8 x 5.1 [16 x 20 x 2]	Pleated, MERV 8

Refrigerant Piping Diagrams

See the matching Condensing Unit IOM for Piping Diagrams

1. H3 SERIES STARTUP FORM

Job Name:	Date
Adress:	
Model Number:	
Serial Number:	Tag:
Startup Contractor:	
Address:	
	Phone:

1.1. Pre Startup Checklist

Installing contractor must verify the following items.	
1. Is there any visible shipping damage?	
2. Is the unit level?	
3. Are the unit clearances adequate for service and operation?	
4. Do all access doors open freely and are the handles operational?	
5. Have all shipping braces been removed?	
6. Have all electrical connections been tested for tightness?	
7. Does the electrical service correspond to the unit nameplate?	
8. On 208/230V units, has transformer tap been checked?	
9. Has overcurrent protection been installed to match the unit nameplate requirement?	
10. Have all set screws on the fans been tightened?	
11. Do all fans rotate freely?	
12. Does the field water piping to the unit appear to be correct per design parameters?	
13. Is all copper tubing isolated so that it does not rub?	
14. Have the damper assemblies been inspected?	
15. Are air filters installed with proper orientation?	
16. Have condensate drain and p-trap been connected?	
17. Is the TXV sensing bulb in the correct location?	
18. Does the TXV sensing bulb have proper thermal contact and is properly insulated?	
19. Are all ship-loose components and cabinets (if applicable) installed per unit drawing and wiring diagram.	
20. Is the actual refrigerant charge of the largest circuit in accordance with the required conditioned floor area according to **Error! Reference source not found.**, **Error! Reference source not found.**, **Error! Reference source not found.**?	
21. Are ventilation and exhaust openings unobstructed?	
22. Are markings, decals, and warnings on unit clearly visible?	
23. Are all damaged or illegible markings and warnings replaced?	
24. Has the functionality of the Refrigerant Detection System been verified?	

1.2. Ambient Temperature

Ambient Dry Bulb Temperature _____°C/°F	Ambient Wet Bulb Temperature _____°C/°F

1.3. Voltage

L1-L2	L2-L3	L1-L3	L1-Ground	L2-Ground	L3-Ground

1.4. Supply Fan Assembly

Alignment ☐		Check Rotation ☐		Nameplate Amps_____
Number	hp	L1 Volts/Amps	Number	hp
1			1	
2			2	
VFD Frequency_____			VAV Controls_____	

1.5. Energy Recovery Wheel Assembly

Wheels Spin Freely ☐		Check Rotation ☐		FLA _____
Number	hp	L1 Volts/Amps	L2 Volts/Amps	L3 Volts/Amps
1				

1.6. Dampers

OA Operation Check ☐	Damper Wiring Check ☐	Gears Check ☐
RA Operation Check ☐	Damper Wiring Check ☐	Gears Check ☐
EA Operation Check ☐	Damper Wiring Check ☐	Gears Check ☐
Damper Actuator Type:_____		
Economizer Changeover Type and Operation:_____		

1.7. Refrigeration System 1 - Cooling Mode

	Pressure	Saturated Temperature	Line Temperature	Sub-cooling	Superheat
Discharge				N/A	N/A
Suction				N/A	
Liquid					N/A

1.8. Refrigeration System 2 - Cooling Mode

	Pressure	Saturated Temperature	Line Temperature	Sub-cooling	Superheat
Discharge				N/A	N/A
Suction				N/A	
Liquid					N/A

1.9. Refrigeration System 3 - Cooling Mode

	Pressure	Saturated Temperature	Line Temperature	Sub-cooling	Superheat
Discharge				N/A	N/A
Suction				N/A	
Liquid					N/A

1.10. Refrigeration System 4 - Cooling Mode

	Pressure	Saturated Temperature	Line Temperature	Sub-cooling	Superheat
Discharge				N/A	N/A
Suction				N/A	
Liquid					N/A

1.11. Compressors/DX Cooling

Check Rotation ☐						
Number	L1 Volts/Amps	L2 Volts/Amps	L3 Volts/Amps	Head Pressure KPA/PSIG	Suction Pressure KPA/PSIG	Crankcase Heater Amps
1						
2						
3						
4						

1.12. Air-Cooled Condenser Fans

Alignment ☐		Check Rotation ☐		Nameplate Amps_____
Number	hp	L1 Volts/Amps	L2 Volts/Amps	L3 Volts/Amps
1				
2				
3				
4				

1.13. Refrigeration System 1 - Heating Mode (Heat Pump Only)

	Pressure	Saturated Temperature	Line Temperature	Sub-cooling	Superheat
Discharge				N/A	N/A
Suction				N/A	
Liquid					N/A

1.14. Refrigeration System 2 - Heating Mode (Heat Pump Only)

	Pressure	Saturated Temperature	Line Temperature	Sub-cooling	Superheat
Discharge				N/A	N/A
Suction				N/A	

Liquid					N/A

1.15. Refrigeration System 3 - Heating Mode (Heat Pump Only)

	Pressure	Saturated Temperature	Line Temperature	Sub-cooling	Superheat
Discharge				N/A	N/A
Suction				N/A	
Liquid					N/A

1.16. Refrigeration System 4 - Heating Mode (Heat Pump Only)

	Pressure	Saturated Temperature	Line Temperature	Sub-cooling	Superheat
Discharge				N/A	N/A
Suction				N/A	
Liquid					N/A

1.17. Water/Glycol System

1. Has the entire system been flushed and pressure checked?	
2. Has the entire system been filled with fluid?	
3. Has air been bled from the heat exchangers and piping?	
4. Is the glycol the proper type and concentration (N/A if water)?	
5. Is there a minimum load of 50% of the design load?	
6. Has the water piping been insulated?	
7. What is the freeze point of the glycol (N/A if water)?_____	

1.18. Electric Heating

Stages_____		Limit Lockout ☐		Aux. Limit Lockout ☐	
Stage	Amps		Stage	Amps	
1			5		
2			6		
3			7		
4			8		

1.19. Gas Heating

1. Does the unit include a shipped loose Heatco gas heater? Refer to provided Heatco IOM for all installation requirements.	

1.20. A2L Mitigation Board

1. Does each port (sensor 1-3) have a male connector plugged in on both the Cabinet and Airstream board?	

2.Do the compressor(s) and gas heat operation shut off when the Cabinet Board is in the alarm state?	
3. Does the unit operate normally except compressor and gas heat operation when the Cabinet Board is in the alarm state?	
4.Do the compressor(s) shut off and fan(s) stay on when the Airstream Board is in the alarm state?	
5. Does non-compressor or gas heating/cooling stay on when both A2L Mitigation boards are in the alarm state?	

2. APPENDIX B: MAINTENANCE LOG

This log must be kept with the unit. It is the responsibility of the owner and/or maintenance/service contractor to document any service, repair or adjustments. AAON Service and Warranty Departments are available to advise and provide phone help for proper operation and replacement parts. The responsibility for proper startup, maintenance and servicing of the equipment falls to the owner and qualified licensed technician.

Entry Date	Action Taken	Name/Tel.

2.1. Maintenance Log (E-Coated Coil)

AAON E-COATED COIL MAINTENANCE RECORD

Installation Site _____ Installation Date _____
Unit Model # _____ Unit Location _____
Unit Serial # _____ Customer _____

Year 20____	Ambient Temp (°F)	Surface Debris Removed	Coil Cleaned	Approved Cleaner Used	Potable Water Backwash Rinse	Potable Water Frontwash Rinse	Chlorides Removed	Comments
Jan								
Feb								
Mar								
Apr								
May								
Jun								
Jul								
Aug								
Sep								
Oct								
Nov								
Dec								

The following cleaning agents have been approved for use on AAON E-Coated Coils to remove mold, mildew, dust, soot, greasy residue, lint and similar particulate without harming the coated surfaces.

CLEANING AGENT	RESELLER	PART NUMBER
GulfClean ™ Coil Cleaner or Enviro-Coil Cleaner	Rectorseal 2601 Spenwick Drive, Houston, Texas 77055 (P): 713-263-8001	G074480 / 80406 or V82540
GulfClean Salt Reducer™	" "	G074490 / 80408

RECOMMENDED CHLORIDE REMOVER
Rectorseal 2601 Spenwick Drive, Houston, Texas 77055 (P): 713-263-8001

AAON

203 Gum Springs Road

Longview, TX 75602-1721

Phone: 903-236-4403

Fax: 903-125-4463

www.AAON.com

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