



**W.W. Gay**  
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Project: 8550163 Palatka Army Reserve

## Submittal #23 30 00-1.1 - 23 30 00 - HVAC Air Distribution - Split System 23 30 00 - HVAC AIR DISTRIBUTION

<b>Revision</b>	1	<b>Submittal Manager</b>	Rachel Roper (W.W. Gay Mechanical Contractor, Inc.)
<b>Status</b>	Open	<b>Date Created</b>	Nov 27, 2023
<b>Issue Date</b>	Nov 27, 2023	<b>Spec Section</b>	23 30 00 - HVAC AIR DISTRIBUTION
<b>Responsible Contractor</b>		<b>Received From</b>	
<b>Received Date</b>		<b>Submit By</b>	
<b>Final Due Date</b>	Dec 25, 2023	<b>Lead Time</b>	
		<b>Cost Code</b>	
<b>Location</b>		<b>Type</b>	Product Data
<b>Approvers</b>	Gary Pate		
<b>Ball in Court</b>	Gary Pate		
<b>Distribution</b>			
<b>Description</b>	Product Data for Split System		

### Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					
Rachel Roper		Dec 11, 2023	Nov 27, 2023	Submitted	<a href="#">US Army Reserve Center Palatka FL Split System Submittal 11-17-2023.pdf (Current)</a>
Gary Pate	Nov 27, 2023	Dec 25, 2023		Pending	



# Submittal

**Date:** November 17, 2023

**Job Name:**  
US Army Reserve Center Palatka FL

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Trane U.S. Inc. is pleased to provide the following submittal for your review and approval. Based on plans and specifications dated 06/20/2022.

## Product Summary

### Qty Product

- 1 Odyssey Split System Indoor Unit
- 1 Odyssey Split System Outdoor Unit

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## NOTES:

1. Corrosion coating product data is attached to this submittal.
2. UV Light product data is attached to this submittal.

**Tyler Gesse (CO)**  
**Account Manager**  
**Trane U.S. Inc.**  
2301 Lucien Way, Suite 430  
Maitland, FL 32751  
Office Phone: (407) 660-1111

The attached information describes the equipment we propose to furnish for this project and is submitted for your approval.

*Submittal acceptance and return is a critical step, so please ensure submittals are returned with approval to release to production within 14 days of submittal date.*

Product performance and submittal data is valid for a period of 6 months from the date of submittal generation. If six months or more has elapsed between submittal generation and equipment release, the product performance and submittal data will need to be verified. It is the customer's responsibility to obtain such verification.

**Tag Data - Odyssey Split System Indoor Unit (Qty: 1)**

Item	Tag(s)	Qty	Description	Model Number
A1	AHU-1	1	6 - 25 Ton Unitary Split Systems Indoor	TWE12043BAA**BD000000000000000000 00000000

**Warranty** *(starts at unit start-up or 6 months from shipment, whatever occurs first)*  
 1 Year Parts and Labor Warranty – Whole Unit

**EXCLUSIONS:** Disconnects, Convenience Outlets, Smoke Detectors, Start Up or Training, Dampers, Refrigerant Piping and Specialties (i.e., line sets, check valves, sight glass, etc.), Condensate Pumps or Float Switches, External Vibration Isolation, Cabinet Coatings, Plenums or Mixing Boxes, In Warranty Labor, Anything Not Listed Above

**Product Data - Odyssey Split System Indoor Unit**

**Item: A1 Qty: 1 Tag(s): AHU-1**

Standard Ship Cycle  
Air Handler  
10 Tons  
R-410A  
208-230/60/3  
Dual Circuit  
Generation B (2023 DOE)  
2 Stage Airflow/SZ VAV-SYMBO condenser  
Standard Motor  
2" MERV 13 FILTER (Field Installed)  
Drip panel kits (Field Installed)  
26.20/34.88kW (208/230/3/60) (Field Installed)  
UV Lights

**Product Report - Odyssey Split System Indoor Unit**  
 Item: A1 Qty: 1 Tag(s): AHU-1

## 6 - 25 Ton Unitary Split Systems Indoor

Unit Overview	
Model	TWE12043BAA**BD000000000000 000000000000
Unit Tonnage	10 Tons
Max A.H. Operating weight	442.0 lb
Min A.H. Operating weight	406.0 lb
Unit Voltage	208-230/60/3
Field Applied Voltage	0
Refrigeration Circuit	Dual Circuit
Controls	2 Stg Airflow/SZVAV - Symbio



Matched Outdoor Unit	
Matched System IEER	14.10 Number
Matched System EER	11.2 EER

Fan Information	
Airflow	3400 cfm
External Static Pressure	0.500 in H2O
External Plus Component Static Pressure	0.570 in H2O
Supply fan motor RPM	765 rpm
Supply fan motor BHP	1.21 bhp
Fan Motor Heat	2.23 MBh

Cooling Information			
Cooling EDB	77.20 F	Gross Sensible Capacity	89.10 MBh
Cooling EWB	64.90 F	Latent Capacity	28.10 MBh
Ambient Temperature	94.00 F	Net Total Capacity	113.38 MBh
Unit Leaving Dry Bulb	54.17 F	Net Sensible Capacity	85.28 MBh
Unit Leaving Wet Bulb	53.61 F		
Gross Total Capacity	117.18 MBh		

Heating Information			
Heat Pump Information		Electric Heat Information	
Winter EDB	70.00 F	Heating EDB	70.00 F
Winter Outdoor Ambient DB	47.00 F	Electric Heat Capacity (kW)	34.91 kW
Heat Pump Capacity	107.62 MBh	Electric Heat Delta T	32.26 F
Gross Heating Capacity	103.31 MBh	Heating LAT	98.76 F
Heating Delta T	28.76 F		

Electrical Information			
External Static Pressure	0.500 in H2O	External Plus Component Static Pressure	0.570 in H2O
MCA - A.H.	100.00 A	MCA - A.H. for 230V w/elect. heat	113.00 A
MOP - A.H.	100.00 A	MOP - A.H. for 230V w/elect. heat	125.00 A
Supply Fan Motor FLA	6.80 A		

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**Product Report - Odyssey Split System Indoor Unit**  
**Item: A1 Qty: 1 Tag(s): AHU-1**

Refrigerant Information	
Evaporator Rows	4
Evaporator Fin Spacing	168 Per Foot
Evaporator face velocity	314 ft/min
Evaporator Face Area	11.18 sq ft
Evaporator Motor FLA	6.80 A

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**Mechanical Specifications - Odyssey Split System Indoor Unit**  
**Item: A1 Qty: 1 Tag(s): AHU-1****General - (TWE)**

- Completely factory assembled
- Convertible for horizontal or vertical configuration
- Convertible for cooling only or heat pump application
- Convertible for left or right external connections (refrigerant and/or electrical)
- Convertible for front or bottom air return
- Nitrogen holding charge
- Certified to UL 1995 for indoor blower coil units

**Casing - (TWE)**

- Zinc coated, heavy gauge, galvanized steel
- Weather resistant baked enamel finish
- Access panels with captive screws
- Completely insulated with foil faced, cleanable, fire retardant, permanent, odorless glass fiber material
- Captured or sealed insulation edges
- Electrical connection bushings or plugs
- Refrigerant connection bushings or plugs
- Withstand elevated internal static pressure

**Refrigeration System - (TWE)**

- Single or dual circuit
- Distributor(s)
- Thermal expansion valves (TXVs)

**Evaporator Coil - (TWE)**

- 3/8" internally enhanced copper tube mechanically bonded to lanced aluminum plate fins
- Factory pressure and leak tested to 449 psig.
- Draw-through airflow
- Dual circuits are interlaced/intertwined
- Double sloped, removable, cleanable, composite drain pan
- Four drain pan positions

**Indoor Fan - (TWE)**

- Double inlet, double width, forward curved, centrifugal type fan
- Dual fans on 12.5-25 ton air handlers-Adjustable belt drive
- Permanently lubricated bearings

**Indoor Motor - (TWE)**

- Adjustable motor sheaves (constant volume units)
- Fixed motor sheaves (SZVAV and 2-Speed VFD)
- Thermal overload protection
- Permanently lubricated bearings
- Meet energy policy of 1992 (EPACT)
- Optional oversized motors for high static applications

**Controls - (TWE)**

- Completely internally wired
- Colored and keyed connectors, colored wires
- Magnetic indoor fan contactor
- Detachable low voltage connectors
- Single point power entry
- Evaporator defrost control

**Single Zone Variable Air Volume / 2-Speed Airflow - TWE**

- Variable Frequency Drive (VFD)
- Motor soft start - avoids start up belt noise and increases belt life
- Programmable VFD keypad accessible outside of airstream
- Airflow adjustment via display/keypad on Symbio™ 700 controller in condenser

- Discharge air sensor
- Symbio 700 Options Module
- VFD rated motor
- Factory installed oversized motor available

**Filters - (TWE)**

- 2 inch, MERV 13 high efficiency filters

**Electric Heaters - (TWE)**

- Heavy duty nickel chromium elements
- Agency approved
- Installs directly on fan discharge
- One or two stage control (dependent upon capacity)
- Single point power entry
- Terminal strip connections

**230V Heaters**

- Internally delta connected
- Automatic reset of high limit controls through pilot duty with secondary backup fuse links

**Dimensional Drawings - Odyssey Split System Indoor Unit**  
**Item: A1 Qty: 1 Tag(s): AHU-1**

## Condenser and Air Handler Pairings

**Table 3. Model number descriptions**

<b>TWE Air Handler with Symbio</b>
<p><b>Digit 15 — Controls</b></p> <p>1 = Constant Volume                  C = 2 Stage Airflow (Electromechanical Condenser Only)                  D = 2 Stage Airflow/Single Zone VAV (Symbio Condenser Only)</p>
<b>TWE Air Handler (pre-Symbio)</b>
<p><b>Digit 15 — Controls</b></p> <p>0 = Constant Volume                  A = 2 Stage Airflow (Electromechanical Condenser Only)                  B = Single Zone VAV (ReliaTel Condenser Only)</p>

**Table 4. Condenser and air handler pairing instructions (See document SS-SVN016A-EN)**

Condenser (model # digit)	Air Handler		Instructions
	Type	Supply Fan Type (model # digit)	
Odyssey Electromechanical (Digit 15 = E)	Odyssey Symbio	Constant Volume (Digit 15 = 1)	
		2-Speed Airflow (Digit 15 = C)	
		Single Zone VAV (Digit 15 = D)	Pairing F, D or G require wire harness kit WIR010190 (required) and WIR010185 (optional) to connect Air Handler Relay Board to VFD.
Odyssey ReliaTel (Digit 15 = R)	Odyssey Symbio	Constant Volume (Digit 15 = 1)	
		2-Speed Airflow (Digit 15 = C)	
		Single Zone VAV (Digit 15 = D)	Pairing F, D or G require wire harness kit WIR010190 (required) and WIR010185 (optional) to connect Air Handler Relay Board to VFD.

**Dimensional Drawings - Odyssey Split System Indoor Unit**  
**Item: A1 Qty: 1 Tag(s): AHU-1**

## Condenser and Air Handler Pairings

**Table 4. Condenser and air handler pairing instructions (continued) (See document SS-SVN016A-EN)**

Condenser (model # digit)	Air Handler		Instructions
	Type	Supply Fan Type (model # digit)	
Odyssey Symbio (Digit 15 = S)	Odyssey Symbio	Constant Volume (Digit 15 = 1)	Install a shielded, twisted pair cable if the Air Handler has Electric Heat and/or requires Single Zone VAV operation (Trane IMC communication)
		2-Speed Airflow (Digit 15 = C)	Pairing G, H, and 2 will not have heat in defrost.  Pairing G, H, and 2; electric heat will not operate if zone sensor installed, only with a thermostat  Install a shielded, twisted pair cable if the Air Handler has Electric Heat and/or requires Single Zone VAV operation (Trane IMC communication)
		Single Zone VAV (Digit 15 = D)	Install a shielded, twisted pair cable if the Air Handler has Electric Heat and/or requires Single Zone VAV operation (Trane IMC communication)  Install a shielded, twisted pair cable for Symbio Condenser control of the Air Handler supply fan VFD (Modbus communication)
	Odyssey Electromechanical	Constant Volume (Digit 15 = 0)	Pairing G, H, and 2 will not have heat in defrost.
		2-Speed Airflow (Digit 15 = A)	Pairing G, H, and 2; electric heat will not operate if zone sensor installed, only with a thermostat.
	Odyssey ReliaTel	Variable Speed, Single Zone VAV (Digit 15 = B)	Pairing G, H, and 2 will not have heat in defrost.  Pairing G, H, and 2; electric heat will not operate if zone sensor installed, only with a thermostat.  Install a shielded, twisted pair cable for Symbio Condenser control of the Air Handler supply fan VFD (Modbus communication)
			Pairing G, H, and 2; electric heat will not operate if zone sensor installed, only with a thermostat.  Pairing F, D or G require wire harness kit WIR010190 (required) and WIR010185 (optional) to connect Air Handler Relay Board to VFD.  This pairing requires the replacement of the RTOM module with a Symbio Relay Board (MOD03105) and that the VFD wires 81B, 82B, 93B, 94B and 94D be replaced with wire harness kit WIR010190 (required) and WIR010185 (optional). The Air Handler will operate as a 2-speed fan.
	Generic Air Handler	Constant Volume	
Two Symbio Condensers (2 condensers to 1 air handler)	Odyssey Electromechanical		

**Dimensional Drawings - Odyssey Split System Indoor Unit**

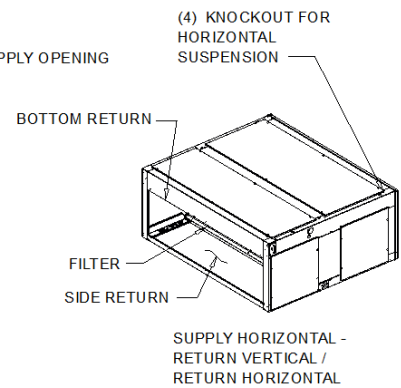
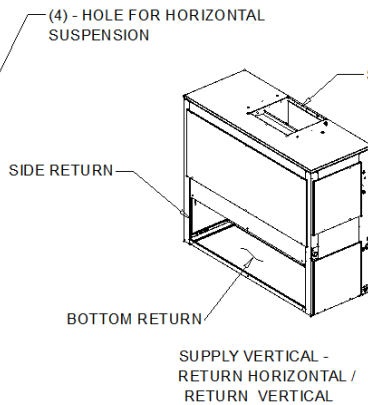
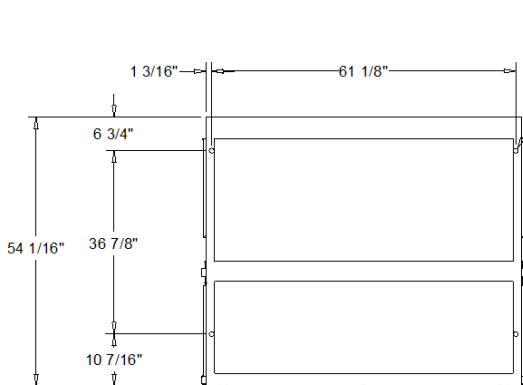
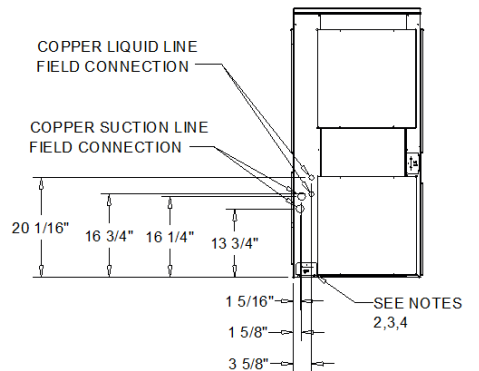
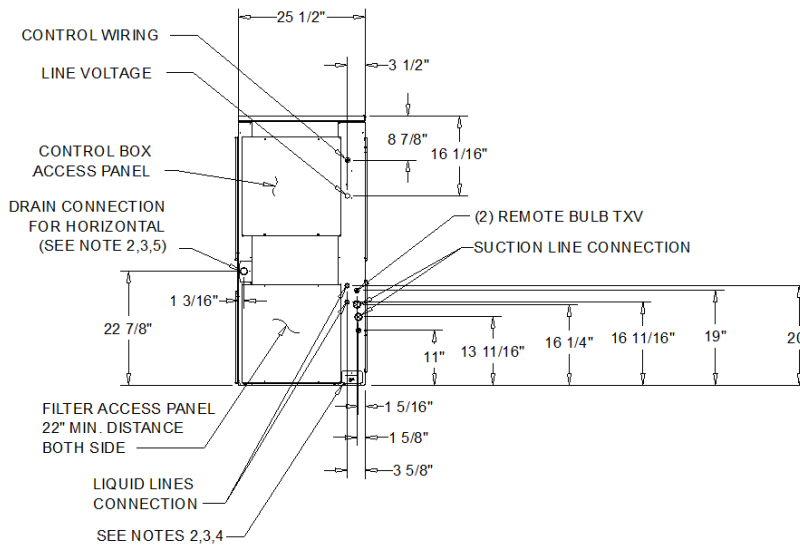
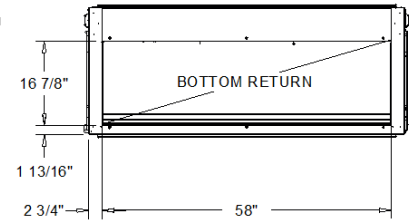
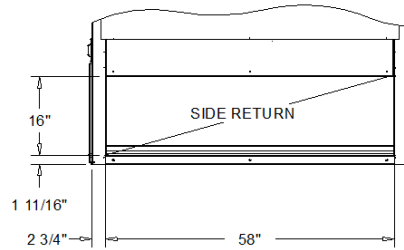
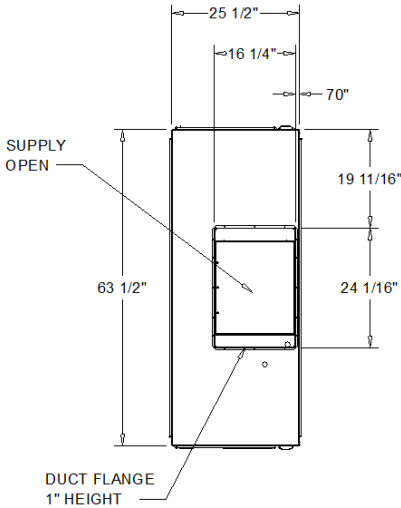
Item: A1 Qty: 1 Tag(s): AHU-1

**NOTES:**

1. PANEL DEPTH 1/2" (TYP ALL PANELS).
2. REMOVABLE DRAIN PAN AND ATTACHED DRAIN CONNECTION MAY BE INSTALLED ON END OF UNIT IN EITHER THE VERTICAL OR HORIZONTAL CONFIGURATION. PLASTIC DRAIN PAN ACCESS PLATE ON THE END OF UNIT OPPOSITE DRAIN CONNECTION MUST BE REMOVED TO SLIDE DRAIN PAN OUT OF UNIT FOR CLEANING. ACCESS PLATE MUST BE RE-INSTALLED AFTER SLIDING DRAIN PAN BACK INTO UNIT.
3. IF PERIODIC DRAIN PAN CLEANING IS REQUIRED, ALLOW ROOM FOR PARTIAL REMOVAL OF DRAIN PAN CONNECTION AT END OF UNIT.
4. 1" FEMALE SCHED. 40 PVC PIPE DRAIN CONNECTION VERTICAL CONFIGURATION.
5. 1" FEMALE SCHED. 40 PVC PIPE DRAIN CONNECTION HORIZONTAL CONFIGURATION.

**REFRIGERANT**

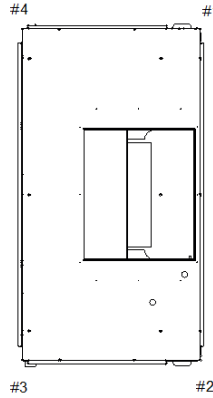
1. SUCTION CONNECTION (1 1/8" OD) AND LIQUID CONNECTION (1/2" OD)



**10 TON AIR HANDLER (DUAL CIRCUIT)**  
DIMENSIONAL DRAWING

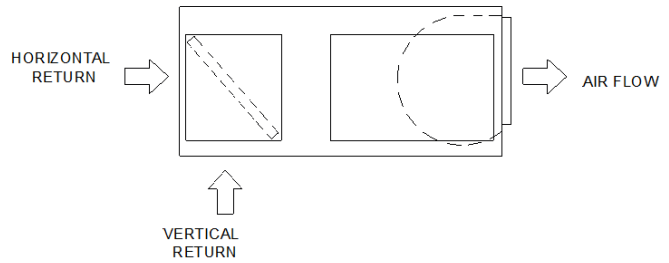
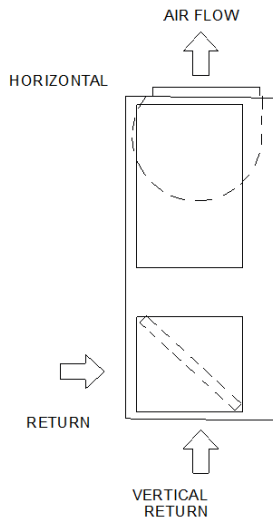
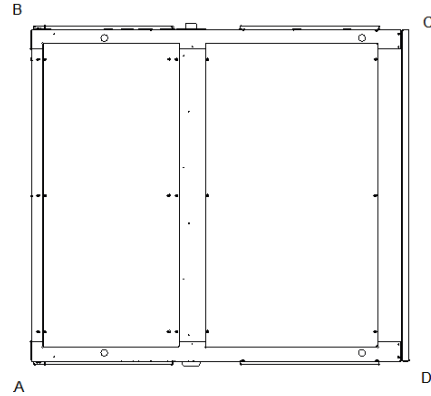
**Weight, Clearance & Rigging - Odyssey Split System Indoor Unit**

Item: A1 Qty: 1 Tag(s): AHU-1



**WEIGHTS AND CORNER WEIGHTS**

Shipping:	454.0 lb
Net	406.0 lb
<b>VERTICAL</b>	
Corner 1:	80.0 lb
Corner 2:	124.0 lb
Corner 3:	113.0 lb
Corner 4:	89.0 lb
<b>HORIZOTNAL</b>	
Corner A:	82.0 lb
Corner B:	121.0 lb
Corner C:	80.0 lb
Corner D:	123.0 lb

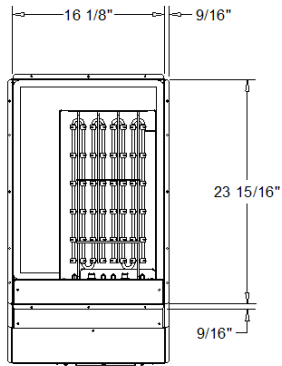


**WEIGHTS AND LOAD POINT LOCATION FOR CONDENSOR**

WEIGHT AND RIGGING

Accessory - Odyssey Split System Indoor Unit

Item: A1 Qty: 1 Tag(s): AHU-1

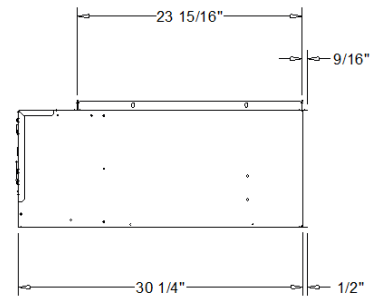
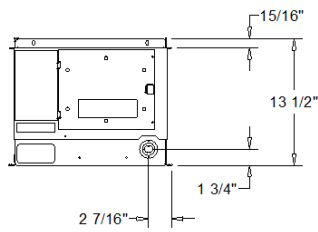
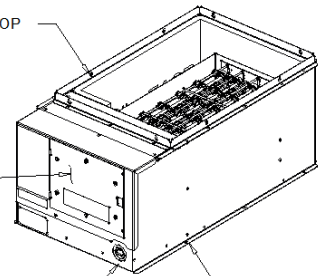


(12) 1/4" DIA HOLE  
SAME PATTERN AS TOP

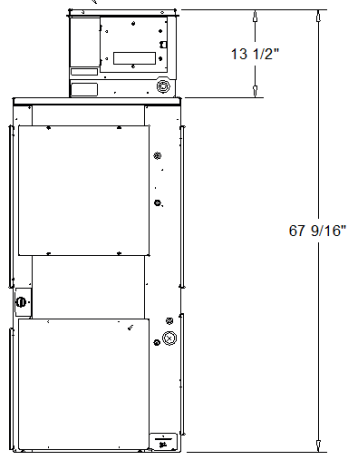
REMOVABLE  
PANEL

3 KNOCKOUT FOR 7/8", 1 3/8" AND 2"  
DIA CONDUIT POWER SUPPLY ENTRY

(12) 1/4" DIA HOLE  
SAME PATTERN AS TOP

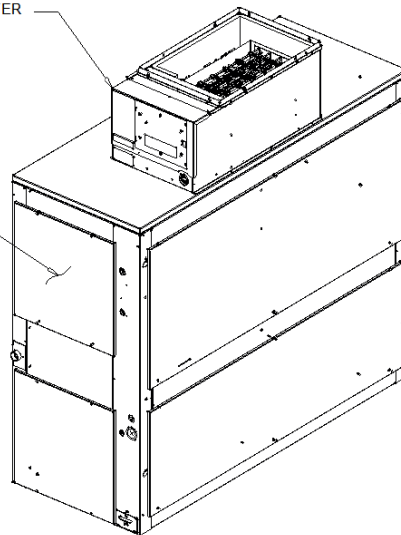


ELECTRIC HEATER



ELECTRIC HEATER

AIR HANDLER



10 TON ELECTRIC HEATER

DIMENSIONAL DRAWING

**Tag Data - Odyssey Split System Outdoor Unit (Qty: 1)**

Item	Tag(s)	Qty	Description	Model Number
B1	HP-1	1	6 - 25 Ton Unitary Split Systems Outdoor	TWA12043DAA**BS0100000000000000 000000000

**Warranty** *(starts at unit start-up or 6 months from shipment, whatever occurs first)*

- 1 Year Parts and Labor Warranty – Whole Unit
- 5 Year Compressor Parts Warranty

**EXCLUSIONS:** Disconnects, Convenience Outlets, Smoke Detectors, Start Up or Training, Dampers, Refrigerant Piping and Specialties (i.e., line sets, check valves, sight glass, etc.), Condensate Pumps or Float Switches, External Vibration Isolation, Cabinet Coatings, Plenums or Mixing Boxes, Anything Not Listed Above

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**Product Data - Odyssey Split System Outdoor Unit**

**Item: B1 Qty: 1 Tag(s): HP-1**

Standard Ship Cycle  
Heat Pump (TWA)  
10 Tons  
R-410A Refrigerant  
208-230/60/3  
Dual Compressors / Dual Circuit  
Condenser Coil Corrosion Coating  
Generation B (2023 DOE)  
Symbio (Heat Pump)  
STD Coil w/ Guards  
Ext. mount Small cabinets (Symbio) (Field Installed)  
Service Valve accessory kit (Field Installed)

**Product Report - Odyssey Split System Outdoor Unit**  
**Item: B1 Qty: 1 Tag(s): HP-1**

## 6 - 25 Ton Unitary Split Systems Outdoor

Unit Overview	
Model	TWA12043DAA**BS010000000000 000000000000
Unit Tonnage	10 Tons
Controls	Symbio (Heat Pump)
Unit Voltage	208-230/60/3
Refrigeration Circuit / Stage	Dual Compressors / Dual Circuit
Unit Function	Heat Pump
Max. Cond. Operating Weight	433.0 lb



Electrical Information			
MCA	42.00 A	Compressor 2 RLA	16.50 A
MOP	50.00 A	Cond. Motor 1 FLA	4.30 A
Compressor 1 RLA	16.50 A	Cond. Motor 2 FLA	0.00 A

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**Mechanical Specifications - Odyssey Split System Outdoor Unit**  
**Item: B1 Qty: 1 Tag(s): HP-1****General - (TWA)**

- Weatherproofed steel mounting/lifting rails
- Hermetic scroll compressors
- Plate fin condenser coils
- Fans and motors
- Standard operating range 50-125°F (min. 0°F with low ambient accessory)
- Nitrogen holding charge
- Certified and rated in accordance with AHRI and DOE standards
- Certified to UL 1995
- Capacities and efficiencies for split systems are rated within the scope of the Air-Conditioning, Heating, & Refrigeration Institute (AHRI) certification program and display the AHRI Standard 340-360 (I-P) mark. This standard applies to units between 65,000 and 250,000 btu/hr.

**Casing - (TWA)**

- Zinc coated, heavy gauge, galvanized steel
- Weather resistant baked enamel finish
- Meets ASTM B117, 672 hour salt spray test
- Removable single side maintenance access panels
- Lifting handles in maintenance access panels
- Unit base provisions for forklift and/or crane lifting

**Condenser Coil (Fin and Tube) - TWA**

- 3/8" internally enhanced copper tube
- Mechanically bonded to lanced aluminum plate fins
- Factory pressure and leak tested to 660 psig

**Condenser Fan - TWA**

- 26" or 28" propeller fan(s)
- Direct drive
- Statically and dynamically balanced

**Condenser Motor(s) - (TWA)**

- Permanently lubricated totally enclosed or open construction
- Built-in current and thermal overloads
- Ball or sleeve bearing type

**Controls - (TWA)**

- Centralized microprocessor
- Indoor and outdoor temperature sensors drive algorithms, making decisions for all heating, cooling, and ventilation
- Integrated anti-short cycle timer
- Integrated time delay between compressors
- Completely internally wired
- Colored and keyed connectors and colored wires
- Contactor pressure lugs or terminal block
- Unit external mounting location for disconnect device
- Single point power entry

**Note:**

*The 2-speed or SZVAV units should not be used with any single-speed, single-compressor condensing unit. The result of this selection will cause the SZVAV AHU to act as a CONSTANT VOLUME.*

**Factory installed perforated steel hail guards**

- Condenser coil protection from hail, vandals, etc.
- Perforated, painted galvanized steel

**Phase Monitor/Reversal Protection**

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Phase monitor shall provide 100% protection for motors and compressors against problems caused by phase loss, phase imbalance, and phase reversal. Phase monitors are equipped with an LED that provides an ON or FAULT indicator. Quick-Access Panels

- Remove a few screws for access to the standardized internal components and wiring.

**Service Valves**

- Liquid line service valve (with gauge port)
- Suction line service valve (with gauge port)

**Dimensional Drawings - Odyssey Split System Outdoor Unit**  
**Item: B1 Qty: 1 Tag(s): HP-1**

# Condenser and Air Handler Pairings

**Table 3. Model number descriptions**

TWE Air Handler with Symbio
<p><b>Digit 15 — Controls</b></p> <p>1 = Constant Volume                      C = 2 Stage Airflow (Electromechanical Condenser Only)                      D = 2 Stage Airflow/Single Zone VAV (Symbio Condenser Only)</p>

TWE Air Handler (pre-Symbio)
<p><b>Digit 15 — Controls</b></p> <p>0 = Constant Volume                      A = 2 Stage Airflow (Electromechanical Condenser Only)                      B = Single Zone VAV (ReliaTel Condenser Only)</p>

**Table 4. Condenser and air handler pairing instructions (See document SS-SVN016A-EN)**

Condenser (model # digit)	Air Handler		Wiring Reference	Instructions
	Type	Supply Fan Type (model # digit)		
Odyssey Electromechanical (Digit 15 = E)	Odyssey Symbio	Constant Volume (Digit 15 = 1)	"Pairing C or 3," p. 10	Pairing F, D or G require wire harness kit WIR010190 (required) and WIR010185 (optional) to connect Air Handler Relay Board to VFD.
		2-Speed Airflow (Digit 15 = C)		
		Single Zone VAV (Digit 15 = D)	"Pairing D," p. 12	
Odyssey ReliaTel (Digit 15 = R)	Odyssey Symbio	Constant Volume (Digit 15 = 1)	"Pairing 4," p. 14	Pairing F, D or G require wire harness kit WIR010190 (required) and WIR010185 (optional) to connect Air Handler Relay Board to VFD.
		2-Speed Airflow (Digit 15 = C)	"Pairing E," p. 16	
		Single Zone VAV (Digit 15 = D)	"Pairing F," p. 16	

**Dimensional Drawings - Odyssey Split System Outdoor Unit**  
**Item: B1 Qty: 1 Tag(s): HP-1**

**Condenser and Air Handler Pairings**

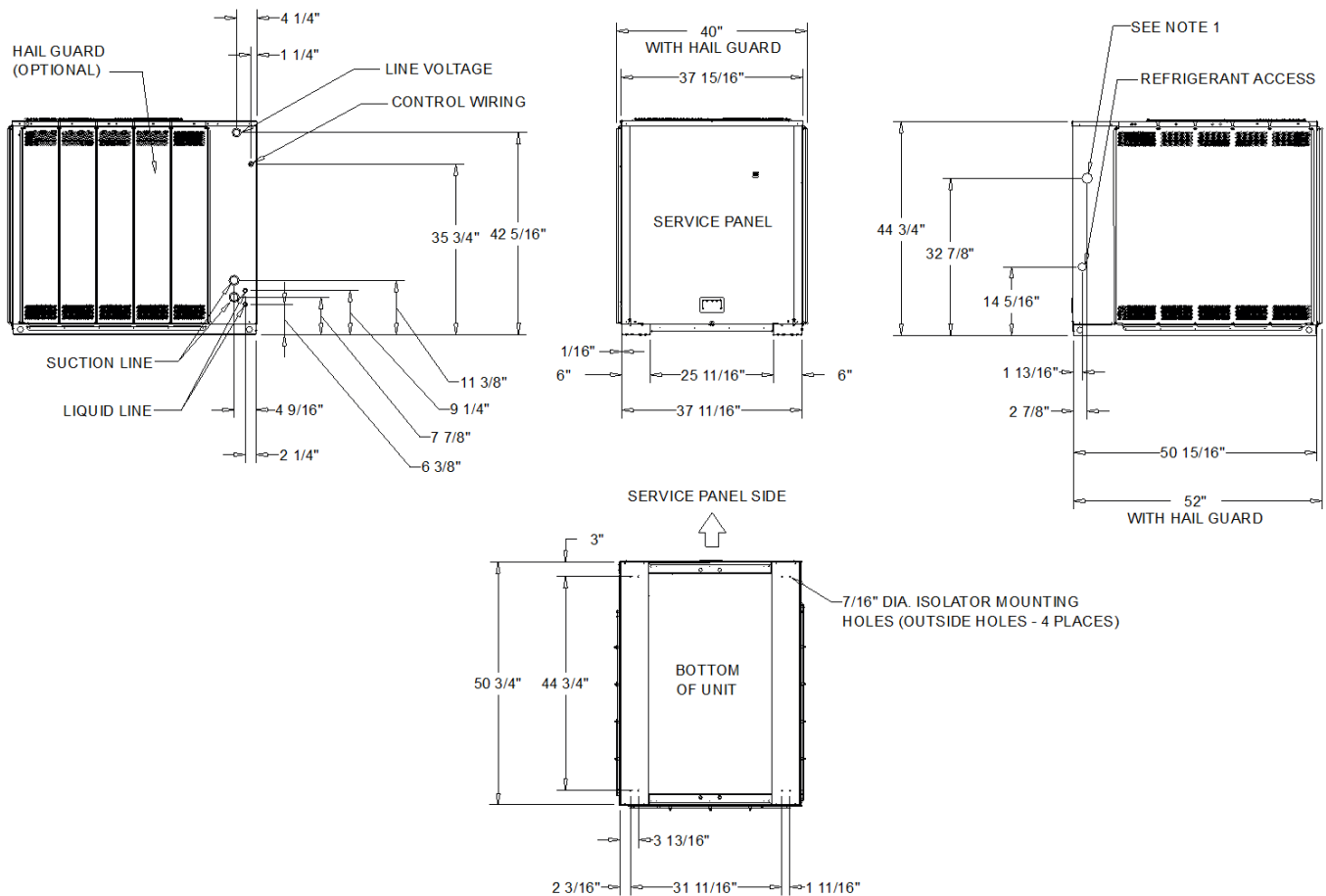
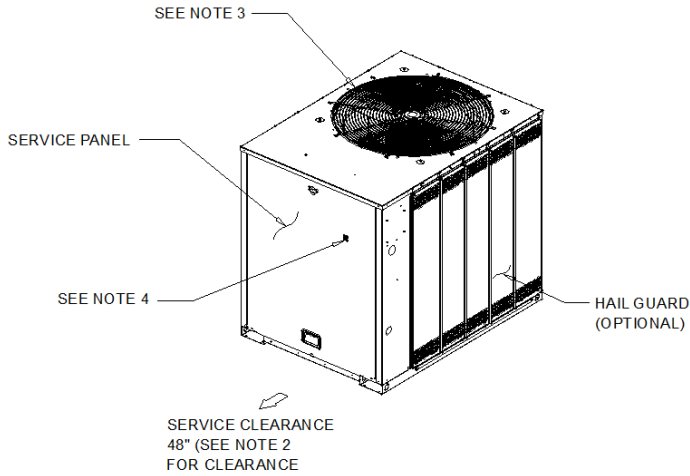
**Table 4. Condenser and air handler pairing instructions (continued) (See document SS-SVN016A-EN)**

Condenser (model # digit)	Air Handler		Wiring Reference	Instructions	
	Type	Supply Fan Type (model # digit)			
Odyssey Symbio (Digit 15 = S)	Odyssey Symbio	Constant Volume (Digit 15 = 1)	"Pairing A," p. 18	Install a shielded, twisted pair cable if the Air Handler has Electric Heat and/or requires Single Zone VAV operation (Trane IMC communication)	
		2-Speed Airflow (Digit 15 = C)	"Pairing H," p. 20	Pairing G, H, and 2 will not have heat in defrost. Pairing G, H, and 2; electric heat will not operate if zone sensor installed, only with a thermostat Install a shielded, twisted pair cable if the Air Handler has Electric Heat and/or requires Single Zone VAV operation (Trane IMC communication)	
		Single Zone VAV (Digit 15 = D)	"Pairing B," p. 18	Install a shielded, twisted pair cable if the Air Handler has Electric Heat and/or requires Single Zone VAV operation (Trane IMC communication) Install a shielded, twisted pair cable for Symbio Condenser control of the Air Handler supply fan VFD (Modbus communication)	
	Odyssey Electromechanical	Constant Volume (Digit 15 = 0)	"Pairing 1 or 2," p. 22	Pairing G, H, and 2 will not have heat in defrost.	
		2-Speed Airflow (Digit 15 = A)		Pairing G, H, and 2; electric heat will not operate if zone sensor installed, only with a thermostat.	
	Odyssey ReliaTel	Variable Speed, Single Zone VAV (Digit 15 = B)	"Pairing G (preferred)," p. 24	Pairing G, H, and 2 will not have heat in defrost. Pairing G, H, and 2; electric heat will not operate if zone sensor installed, only with a thermostat. Install a shielded, twisted pair cable for Symbio Condenser control of the Air Handler supply fan VFD (Modbus communication)	
			"Pairing G (optional)," p. 27	Pairing G, H, and 2; electric heat will not operate if zone sensor installed, only with a thermostat. Pairing F, D or G require wire harness kit WIR010190 (required) and WIR010185 (optional) to connect Air Handler Relay Board to VFD. This pairing requires the replacement of the RTOM module with a Symbio Relay Board (MOD03105) and that the VFD wires 81B, 82B, 93B, 94B and 94D be replaced with wire harness kit WIR010190 (required) and WIR010185 (optional). The Air Handler will operate as a 2-speed fan.	
	Generic Air Handler	Constant Volume	"Pairing Y," p. 29		
	Two Symbio Condensers (2 condensers to 1 air handler)	Odyssey Electromechanical		"Pairing Z," p. 30	

**Dimensional Drawings - Odyssey Split System Outdoor Unit**  
**Item: B1 Qty: 1 Tag(s): HP-1**

**NOTES:**

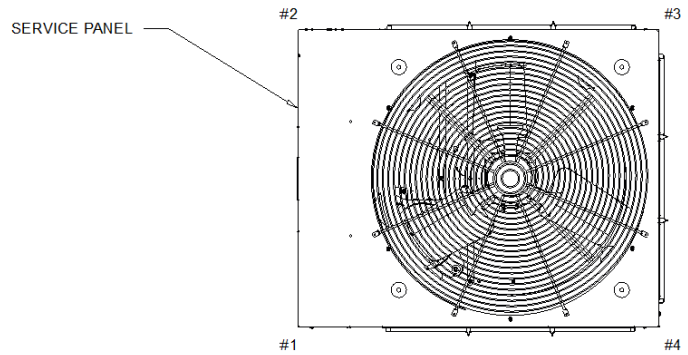
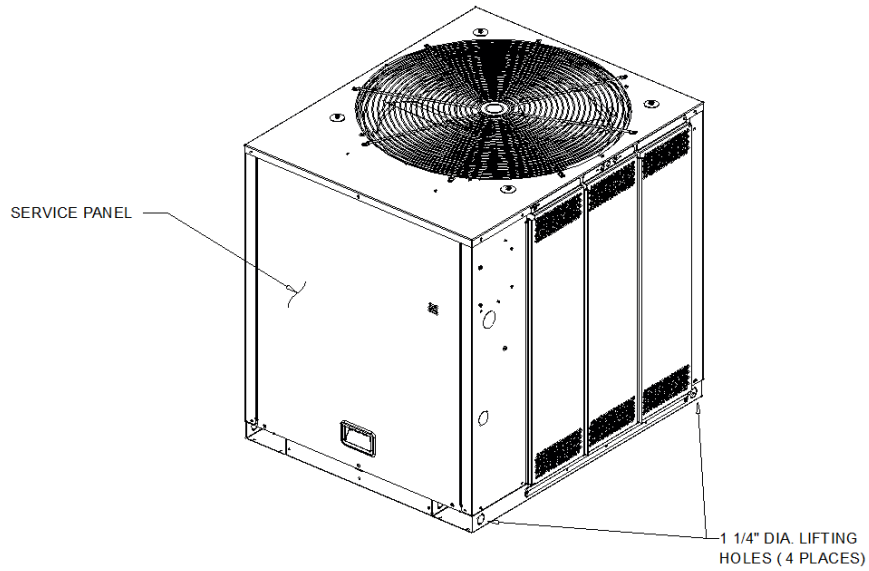
1. ACCESS OPENING IS FOR FIELD INSTALLED BAYLOAM ACCESSORY.
  2. MINIMUM CLEARANCE FOR PROPER OPERATION IS 36" FROM WALLS, SHRUBBERY, PRIVACY FENCES ETC. MINIMUM CLEARANCE BETWEEN ADJACENT UNITS IS 72". RECOMMENDED SERVICE CLEARANCE 48"
  3. TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR 100" MINIMUM. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER DOES NOT POUR DIRECTLY ON UNIT
  4. OUTDOOR AIR TEMPERATURE SENSOR OPENING (DO NOT BLOCK OPENING)
- REFRIGERANT**
1. SUCTION CONNECTION 1 1/8"OD) AND LIQUID CONNECTION (1/2" OD)



**10 TON HEAT PUMP CONDENSER (DUAL COMPRESSOR)**

DIMENSIONAL DRAWING

**Weight, Clearance & Rigging - Odyssey Split System Outdoor Unit**  
**Item: B1 Qty: 1 Tag(s): HP-1**



WEIGHTS AND CORNER WEIGHTS

Shipping:	478.0 lb
Net	433.0 lb
Corner 1:	125.0 lb
Corner 2:	119.0 lb
Corner 3:	96.0 lb
Corner 4:	93.0 lb

WEIGHTS AND LOAD POINT LOCATION

WEIGHT AND RIGGING

**Blygold**<sup>®</sup>  
CORROSION PROTECTION



## **PoluAl XT**

- ✓ Prevents corrosion
- ✓ Special spray technique
- ✓ Heat conductive

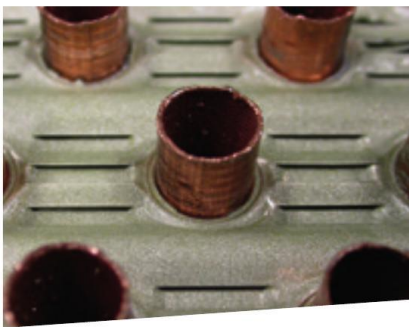
**BLYGOLD PoluAl XT**

**Blygold PoluAl XT – HVAC/R coil protection**

Blygold has developed pioneering coatings specifically for HVAC corrosion protection. From the very beginning Blygold has always focused on corrosion protection for heat exchangers. Different types of corrosion such as galvanic or pitting rapidly decrease the heat exchange efficiency of coils and the efficiency of the total HVAC equipment.

In the quest for more efficient air-conditioning equipment several innovations have increased the nominal efficiency of heat exchanger coils. With the introduction of enhanced fins, increased fin density, adiabatic systems and micro channels not only the nominal efficiency has increased but also pollution and corrosion vulnerability. High pressure failures, early replacements and increased power consumption can be prevented with the right preventive and corrective measures. Protecting these heat exchangers calls for specialists. The geometry makes the application of coatings complicated and the need for heat transfer excludes standard coating systems.

**WITH BLYGOLD POLUAL XT**



**WITHOUT BLYGOLD POLUAL XT**



**Special product**

Our most coveted product is PoluAl XT: an aluminium pigmented polyurethane coating especially developed for the protection of air-cooled heat exchangers. PoluAl XT stands apart from the rest. It has an excellent chemical and UV resistance. It offers flexibility, excellent adhesion with negligible effect on the heat transfer. Plus it can be applied in a very thin layer, to prevent pressure drop. PoluAl XT combines all these properties with extraordinary corrosion protection.

- ✓ Heat conductive
- ✓ 11.000+ hours salt spray test UV resistance
- ✓ UV resistance
- ✓ Ultra thin layer (20 µm) to prevent pressure drop
- ✓ Highly Flexible

[www.blygold.com](http://www.blygold.com)

**BLYGOLD PoluAl XT**

**The application**

A good coating will only perform when applied in a high quality process. Coating heat exchangers requires specialists that are able to apply the coating on every piece of bare metal present in a heat exchanger. Blygold uses proprietary spray techniques that can only be practiced by certified applicators. These qualified applicators are essential to realize a corrosion resistant and maintenance friendly heat exchanger. Blygold coating application is preferably done in a conditioned Blygold workshop but is, under restricted circumstances, also possible on-site.

**WITHOUT BLYGOLD POLUAL XT**



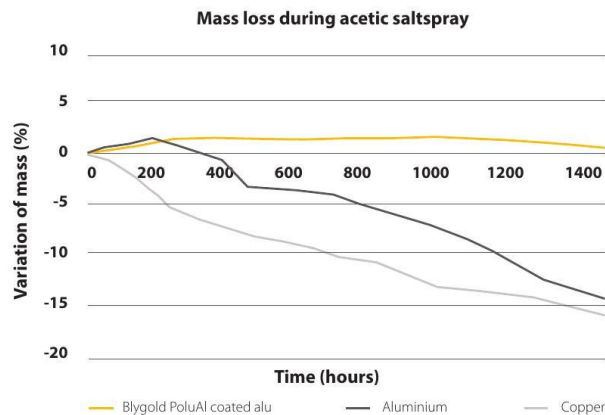
**WITH BLYGOLD POLUAL XT**



**TECHNICAL INFORMATION**

<b>Treatment:</b>	PoluAl XT
<b>Coating type:</b>	Aluminum pigmented Polyurethane
<b>Color:</b>	Champagne
<b>Pretreatment:</b>	Degreasing
<b>Temperature Range (dry):</b>	-20° to 150 °C (-4° to 302 °F)
<b>Substrates:</b>	Aluminum and Copper
<b>ASTM B117:</b>	11,000+ hours
<b>ASTM B-287:</b>	4,000+ hours
<b>Kesternich (2.0 ltr SO2):</b>	80 cycles
<b>Layer Thickness:</b>	25 -30 µm (1 mil)
<b>Pressure Drop:</b>	0-5%
<b>Thermal Resistance:</b>	0-3%
<b>Application:</b>	Qualified Blygold Applicator
<b>UV Resistance:</b>	Excellent
<b>Adhesion (cross hatch):</b>	0 (European) 5b (USA)
<b>Applications:</b>	Heat exchanging surfaces in high temperatures
<b>Chemical Resistance:</b>	Excellent

*A good product  
is just half the job,  
the application  
is just as  
important!*



www.blygold.com



**BLYGOLD INTERNATIONAL**

**Blygold is an innovative and forward-thinking company offering unique and sustainable high-quality protection against corrosion. With over 40 years experience, we have the know-how and state-of-the-art products and techniques to solve any corrosion problem. Our multitude of success stories says it all.**

**Application protocols**

Because of the specific geometry of heat exchangers, the quality of the application process is just as important as the applied product. Blygold has developed specific application protocols for heat exchangers of all different dimensions, geometries and materials.

**Global network**

To ensure our products are applied according to these protocols, Blygold works with trained and certified applicators only. Our global network of qualified Blygold applicators can offer local support in over 60 countries around the world.



**Quality**

- ✓ Over 40 years of experience
- ✓ Unique application techniques
- ✓ Unrivalled test results
- ✓ All trained & qualified applicators
- ✓ ISO 9001 Certified



**Innovation**

- ✓ Revolutionary R&D
- ✓ Inhouse laboratory
- ✓ Deep understanding of the market
- ✓ Global awareness of customer needs
- ✓ Problem solving mentality



**Sustainability**

- ✓ Lifetime extension
- ✓ Energy saving & Eco Friendly
- ✓ Life Cycle Cost reduction
- ✓ Maintenance friendly
- ✓ Corporate Social Responsibility



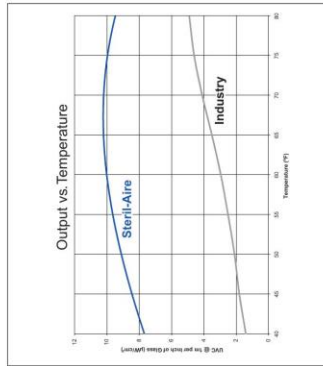
P.O. box 44 3990 DA Houten T. +31 30 634 43 44  
 The Netherlands E. info@blygold.com  
[www.blygold.com](http://www.blygold.com)

**Your local Blygold applicator**

# STERIL-AIRE™

## UVC for HVAC™

Double-Ended, Very High Output Germicidal UVC for HVAC Systems



Steril-Aire's multi-patented UVC Emitter provides the best and longest-lasting UVC performance available. As shown in the comparison graph (above), it has been independently tested to deliver up to 6 times the output of other ultraviolet devices under HVAC operating conditions (50 °F @ 400 fpm air velocity).

## Model DE Series UVC Emitters™

Competitive UVC lights must be changed every 3-4 months because they quickly lose the output or "killing power" needed to maintain microbial control. The UVC Emitter, by contrast, has a 12-month service life – and even after a full year, it has more than 3 times greater output than competitive devices deliver on Day 1! As a result, only Steril-Aire can ensure the germicidal performance you need.

### Applications

Steril-Aire Double-Ended (DE Series) fixtures are used for internal installation in new and retrofit, medium to large air handling systems in commercial, industrial, health care and institutional buildings. They may be mounted singly, in built-up banks or in parallel configurations in a variety of locations, including coils, drain pans, ductwork, mixed air plenums and exhaust systems. The DE Series is available in six lengths (18", 24", 30", 36", 42", and 62") 110-277 V, 50/60 Hz, providing installation flexibility to accommodate virtually any system.

### Benefits

- Reduces HVAC energy costs by restoring heat transfer and net cooling capacity.
- Uses germicidal UVC irradiation proven as an effective inactivation method for mold, bacteria and viruses.
- Eliminates costly cleaning programs and the use of harmful chemicals and disinfectants by continuously cleaning coils, drain pans, plenums and ducts.
- Delivers up to 6 times the output of competitive UVC products at HVAC operating temperatures, for longer life and more reliable germicidal control.
- Offers lowest life-cycle cost of any UVC product. Return on investment is often less than one year.
- Uses patented state-of-the-art solid-state electronic power supply for enhanced reliability and performance.
- Produces no ozone or other secondary contaminants.
- The most widely used germicidal UVC for commercial HVAC systems.
- Improves Indoor Air Quality (IAQ).

### Model DE Specifications

The UVC Emitter™ and fixture shall be factory assembled and tested. They shall consist of a fixture, power supply, reflector, Emitter sockets and Emitter.

The fixture shall be constructed of 304 stainless steel to withstand HVAC environments. The reflector shall be constructed of heavy gauge, specular finished aluminum alloy with approximately 85% reflectance at 254 nm wavelength. The housing shall be equipped with 1.2" electrical conduit opening/s on each end to facilitate wiring fixture-to-fixture coupling. All components shall be in one integral assembly to maximize serviceability.

The power supply shall be a Class P2, electronic, rapid start type with a power factor greater than 0.98 and a power conversion of greater than 90%. The power supply design shall include RF and EMI suppression. The power supply shall be designed to maintain a minimum output of 100% RH. The fixture shall be available in 110-277 V, 50/60 Hz, single phase.

The Emitter sockets are medium bi-pin, double click safety, twist lock type. They shall be constructed of UVC-resistant polycarbonate.

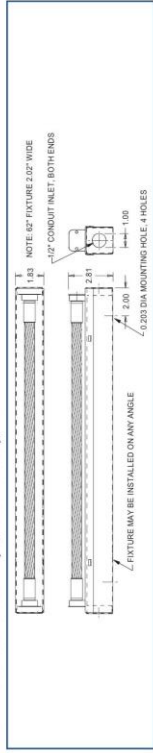
The Emitter shall be a very high output, hot cathode, T5 diameter, medium bi-pin type that produces germicidal UVC at 253.7 nm. The DE Emitter shall be capable of producing up to 2000 microwatts per air square foot at 55-140 °F. It shall produce no ozone or other secondary contaminants.

**Independent testing:** The unit shall be tested by an independent test laboratory and shall be verified to provide output per one inch arc length of not less than 9 µW/cm<sup>2</sup> at 1 meter in a 400 fpm airstream of 50 °F.

Unit shall comply with ANSI/UL Standards 153, 1598, 1095, and CSA and CE standards. The manufacturer shall be an ISO 9001:2008 certified facility.

Sleeved, shatter-resistant Emitters shall be available, ensuring the highest level of protection for moisture-proof applications.

**Mounting:** Custom rack/framing configurations are available for any coil or air handler.



This product may be covered by one or more of the following patents, others pending: 5,334,477 / 5,817,276 / 5,866,076 / 6,245,293 / 6,267,924 / 6,230,686 / 6,313,470 / 6,372,186 / 6,423,882 / 6,500,267 / 6,589,476 / 6,627,000 / 6,997,278 / 7,140,749 / 7,282,728 / 7,459,694.

### Ordering Information

Model No.	Part No.	Description	Fixture Length	Electrical	Wattage
DE 181 VO	100015000	Double-Ended Fixture	18"	120-277 V	60 W
DE 241 VO	100016000	Double-Ended Fixture	24"	120-277 V	72 W
DE 301 VO	100017000	Double-Ended Fixture	30"	120-277 V	84 W
DE 361 VO	100018000	Double-Ended Fixture	36"	120-277 V	96 W
DE 421 VO	100019000	Double-Ended Fixture	42"	120-277 V	108 W
DE 621 VO	100019000	Double-Ended Fixture	62"	120-277 V	150 W

### Replacement UVC Emitters

Model No.	Part No.	Description	Emitter Length	Wattage
DE 181 VO	200001000	UVC Emitter - DE 181	18.0"	60 W
DE 241 VO	200002000	UVC Emitter - DE 241	22.4"	72 W
DE 301 VO	200003000	UVC Emitter - DE 301	28.4"	84 W
DE 361 VO	200004000	UVC Emitter - DE 361	34.4"	96 W
DE 421 VO	200005000	UVC Emitter - DE 421	40.4"	108 W
DE 621 VO	200007000	UVC Emitter - DE 621	60.4"	150 W

### Optional Accessories

Model No.	Part No.	Description
DE 181 VO	900002250	DE Bracket for 10 DE fixtures
DE 241 VO	900002254	DE Bracket for 10 DE fixtures
DE Wiring Kit for up to 65'	900000603	(DE Bracket install)



### Steril-Aire, Inc.

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 Email: [sales@steril-aire.com](mailto:sales@steril-aire.com)

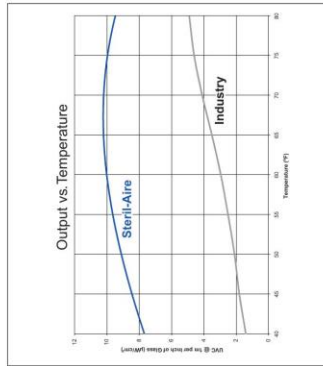
Represented By:

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# STERIL-AIRE™

## UVC for HVAC™

Double-Ended, Very High Output Germicidal UVC for HVAC Systems



Steril-Aire's multi-patented UVC Emitter provides the best and longest-lasting UVC performance available. As shown in the comparison graph (above), it has been independently tested to deliver up to 6 times the output of other ultraviolet devices under HVAC operating conditions (50 °F @ 400 fpm air velocity).

## Model DE Series UVC Emitters™

Competitive UVC lights must be changed every 3-4 months because they quickly lose the output or "killing power" needed to maintain microbial control. The UVC Emitter, by contrast, has a 12-month service life – and even after a full year, it has more than 3 times greater output than competitive devices deliver on Day 1! As a result, only Steril-Aire can ensure the germicidal performance you need.

### Applications

Steril-Aire Double-Ended (DE Series) fixtures are used for internal installation in new and retrofit, medium to large air handling systems in commercial, industrial, health care and institutional buildings. They may be mounted singly, in built-up banks or in parallel configurations in a variety of locations, including coils, drain pans, ductwork, mixed air plenums and exhaust systems. The DE Series is available in six lengths (18", 24", 30", 36", 42", and 62") 110-277 V, 50/60 Hz, providing installation flexibility to accommodate virtually any system.

### Benefits

- Reduces HVAC energy costs by restoring heat transfer and net cooling capacity.
- Uses germicidal UVC irradiation proven as an effective inactivation method for mold, bacteria and viruses.
- Eliminates costly cleaning programs and the use of harmful chemicals and disinfectants by continuously cleaning coils, drain pans, plenums and ducts.
- Delivers up to 6 times the output of competitive UVC products at HVAC operating temperatures, for longer life and more reliable germicidal control.
- Offers lowest life-cycle cost of any UVC product. Return on investment is often less than one year.
- Uses patented state-of-the-art solid-state electronic power supply for enhanced reliability and performance.
- Produces no ozone or other secondary contaminants.
- The most widely used germicidal UVC for commercial HVAC systems.
- Improves Indoor Air Quality (IAQ).

### Model DE Specifications

The UVC Emitter™ and Fixture shall be factory assembled and tested. They shall consist of a fixture, power supply, reflector, Emitter sockets and Emitter.

The fixture shall be constructed of 304 stainless steel to withstand HVAC environments. The reflector shall be constructed of heavy gauge, specular finished aluminum alloy with approximately 85% reflectance at 254 nm wavelength. The housing shall be equipped with 1.2" electrical conduit opening/s on each end to facilitate wiring fixture-to-fixture coupling. All components shall be in one integral assembly to maximize serviceability.

The power supply shall be a Class P2 with a power factor greater than 0.98 and a power conversion of greater than 90%. The power supply design shall include RF and EMI suppression. The power supply shall be designed to maximize the life of the UVC Emitter and shall be available in 110-277 V, 50/60 Hz, single phase.

The Emitter sockets are medium bi-pin, double click safety twist lock type. They shall be constructed of UVC-resistant polycarbonate.

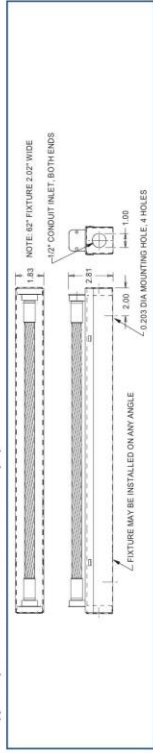
The Emitter shall be a very high output, hot cathode, T5 diameter, medium bi-pin type that produces germicidal UVC of 253.7 nm. The DE Emitter shall operate in air velocities of up to 2000 fpm and air temperatures of 35-140 °F. It shall produce no ozone or other secondary contaminants.

**Independent testing:** The unit shall be tested by an independent test laboratory and shall be verified to provide output per one inch arc length of not less than 9 µW/cm² at 1 meter in a 400 fpm airstream of 50 °F.

Unit shall comply with ANSI/UL Standards 153, 1598, 1995, and CSA and CE standards. The manufacturer shall be an ISO 9001:2008 certified facility.

Sleeved, shatter-resistant Emitters shall be available, ensuring the highest level of protection for moisture-proof applications.

**Mounting:** Custom rack/framing configurations are available for any coil or air handler.



This product may be covered by one or more of the following patents, others pending: 5,334,347 / 5,817,276 / 5,866,076 / 6,245,293 / 6,267,924 / 6,230,686 / 6,313,470 / 6,372,186 / 6,423,882 / 6,500,287 / 6,589,476 / 6,627,000 / 6,997,378 / 7,140,749 / 7,282,728 / 7,459,694.

### Ordering Information

Model No.	Part No.	Description	Fixture Length	Electrical	Wattage
DE 181 VO	10002100	Double-Ended Fixture	18"	110-277 V	50 W
DE 241 VO	10002200	Double-Ended Fixture	24"	110-277 V	72 W
DE 301 VO	10002300	Double-Ended Fixture	30"	110-277 V	84 W
DE 361 VO	10002400	Double-Ended Fixture	36"	110-277 V	96 W
DE 421 VO	10002500	Double-Ended Fixture	42"	110-277 V	108 W
DE 621 VO	10002600	Double-Ended Fixture	62"	110-277 V	150 W

### Replacement UVC Emitters

Model No.	Part No.	Description	Emitter Length	Wattage
DE 181 VO	20000100	UVC Emitter - DE 181	18.4"	65 W
DE 241 VO	20000200	UVC Emitter - DE 241	22.4"	72 W
DE 301 VO	20000300	UVC Emitter - DE 301	28.4"	84 W
DE 361 VO	20000400	UVC Emitter - DE 361	34.4"	96 W
DE 421 VO	20000500	UVC Emitter - DE 421	40.4"	108 W
DE 621 VO	20000600	UVC Emitter - DE 621	60.4"	150 W

### Optional Accessories

Model No.	Part No.
DE Emitter Kit for 10 DE Fixtures	90000224
DE Wiring Kit for up to 657 (DE Bank install)	90000603



Steril-Aire, Inc.

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11088



Represented By:

**Field Installed Options - Part/Order Number Summary**

This is a report to help you locate field installed options that arrive at the jobsite. This report provides part or order numbers for each field installed option, and references it to a specific product tag. It is NOT intended as a bill of material for the job.

**Product Family - Odyssey Split System Indoor Unit**

Item	Tag(s)	Qty	Description	Model Number
A1	AHU-1	1	6 - 25 Ton Unitary Split Systems Indoor	TWE12043BAA**BD00000 00000000000000000000

Field Installed Option Description	Part/Ordering Number
2" MERV 13 FILTER	BAYFILT003A
Drip panel kits	BAYDRKT008B
26.20/34.88kW (208/230/3/60)	BAYHTRN335B

**Product Family - Odyssey Split System Outdoor Unit**

Item	Tag(s)	Qty	Description	Model Number
B1	HP-1	1	6 - 25 Ton Unitary Split Systems Outdoor	TWA12043DAA**BS010000000000000 000000000

Field Installed Option Description	Part/Ordering Number
Ext. mount Small cabinets (Symbio)	BAYLOAMS10B
Service Valve accessory kit	BAYVALV003A