

Vendor shall provide a 50 Ton (600,000 BTU / 175842.642 Watt) portable, hydronic air handler with the following characteristics:

- 1) The skid shall be fabricated from 3/16" thick, 6" X 4" rectangular steel tube. The skid size is length and width plus piping headers so that no part of the unit is outside of the rack. The fork truck lifting slots are 4" X 10" X 3/16" and made of the same material and are incorporated into the design on 48" centers apart. The skid components are continuously welded at all joints. All tubing ends are capped and continuously welded. The skid incorporates 4" X 4" tie-down holes in each corner of the tubing and is welded solid. All unit serial numbers and weight tags shall be cutout on a steel plate and attached to the skid at diagonal corner locations. Center of gravity will be clearly marked on the upper and lower portion of the skid / frame assembly.
- 2) The lifting frame material shall be 3" X 3" square steel tubing. This frame is designed for overhead lifting and stacking of the units. All tubing ends are capped and continuously welded. The tubing is cut and fit to the height, width, and length of the unit. All corners have a 45 degree, 3/8" steel plate gusset. The top of the frame has a 3/8" steel plate superman gusset welded to the horizontal tubing and incorporates a 1½ inch hole that aligns with the drag eye to secure stacking of units.
- 3) The entire skid and lifting / stacking frame shall be provided with a hot dipped galvanized coating for increased corrosion protection.
- 4) The exterior skin of the unit shall be formed from 16 gauge 304 stainless steel. The double wall interior liner shall be formed from 20 gauge 304 stainless steel.
- 5) The units shall be insulated with 1" Thermax foam board insulation. Unit doors to be double-wall construction using 16 gauge, 304 stainless steel on the outer wall and 20 gauge, 304 stainless steel on the inner wall. All corners shall be continuously welded.
- 6) The hardware shall be non-corrosive material to include: Tek-screws, door hinges, and positive acting door latches.
- 7) The drain pan shall be formed and continuously welded using T-304 stainless steel. The coil hat sections shall be formed and welded using T-304 stainless steel and designed to allow for easy coil removal. All coil drain lines and pee traps shall be fitted from 1 ½" stainless steel fittings. Drain connection is provided.
- 8) Filters shall be mounted in a 2" track installed on the inlet airside of the unit. The filters shall be slip in, 2" - 30% pleats. Blank-offs shall be sealed and caulked.
- 9) Each unit shall have (2) discharge collars, sized 19.75" round and are welded to the exterior wall. Each duct collar will be provided with friction type duct clamps and covers.
- 10) Each unit shall have (4) return collars, sized 19.75" round and are welded to the exterior wall. Each duct collar will be provided with friction type duct clamps covers.
- 11) The fan shall be an ACF Class II, Arrangement 3, belt-drive, plenum fan. The fan wheel shall be aluminum and the shaft shall be all steel. The fan bearings are warranted under original manufacturer's warranty. The drive shall be a belt system rated for a 1.3 service factor. The fan motor shall be T.E.F.C. 460/3/60.
- 12) All coils shall be provided to meet the scheduled performance. All coil performance shall be certified in accordance with ARI Standard 410. All coils shall be tested at 315 psig air pressure.

VA Central California Healthcare System

Salient Characteristics: 50 Ton Hydronic Portable Air Handling Unit

- 13) All coils shall have 5/8" OD seamless copper tubes mechanically expanded into fins to ensure high thermal performance with lower total flow and pumping requirements. Minimum tube wall thickness shall be 0.020 inches.
- 14) Aluminum plate fins with belled collars are standard.
- 15) Aluminum-finned coils shall be supplied with die formed casing and tube sheets of mill galvanized steel.
- 16) The evaporator coil shall have corrosion resistant coating applied the exterior surfaces. The evaporator coil shall have a low water level drain valve installed with exterior access for winterization purposes.
- 17) The coil connections shall have flanged butterfly isolation valves and 4" Dixon brass quick connects.
- 18) Provided chilled water temperature and pressure taps at coil connections.
- 19) The evaporator coil piping header shall have a tubing connected to the vent and drain for draining and venting air. The electrical controls shall include a NEMA 4 disconnect box equipped with a circuit breaker, magnetic starter, pilot lights for phase incorrect and power, and a unit OFF/AUTO two position switch.
- 20) Provide and install VFD for variable airflow operation using a potentiometer.
- 21) 4/0 cam-lock terminals will be provided for power hookup.
- 22) The unit shall be manufactured in accordance with NEC codes, ETL requirements and labeled with the appropriate 3rd party NRTL as requested.
- 23) Unit to be test run before acceptance.
- 24) Parameters:
 - a. Cooling Coil
 - i. Flow (FPM): 446
 - ii. EAT: DB (Dry Bulb) 95F / WB (Wet Bulb) 80F
 - iii. LAT: DB (Dry Bulb) 53.1F / WB (Web Bulb) 53F
 - iv. MBH (Total): 605.8 (50.41 T)
 - v. MBH Sensible: 286.4 (23.86 T)
 - vi. Rows: 8
 - vii. FPI (Fins Per Inch): 10
 - viii. EWT (Entering Water Temperature): 45F
 - ix. LWT (Leaving Water Temperature): 55.1F
 - x. GPM (Gallons Per Minute): 119.6
 - b. Fan
 - i. CFM (Cubic Feet Minute): 6,250 @ 5.0 SP
 - ii. Motor Horse Power: 10
 - iii. Voltage: 460 VAC

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- iv. Frequency: 60 HZ
 - v. Phase: 3
- c. Dimensions / Weight
- i. Dimensions: 83" L x 107 ¼" W x 57 ½" H
 - ii. Weight: 3,200 lbs.