

SECTION 23 75 00

CUSTOM-PACKAGED OUTDOOR HVAC EQUIPMENT

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The general provisions of the contract, including the conditions of the contract (General, Supplementary and other Conditions, if any) and Division 1 as appropriate, apply to the work specified in this section.
- B. Refer to Section 23 00 00 for HVAC General Provisions
- C. Refer to Section 23 05 00 for HVAC Basic Materials & Methods.

1.2 DESCRIPTION OF WORK

- A. This Section includes all work necessary and/or required and all materials and equipment for construction of a complete system. Such work includes, but is not limited to the following:
 - 1. Heat Recovery Rooftop Unit (Pool Unit)

1.3 REFERENCE STANDARDS

- A. Refer to Section 23 00 00 for a general description of requirements applying to this section.
- B. Media type air filters shall comply with U.L. Standard 900.

1.4 QUALITY ASSURANCE

- A. Refer to Section 23 05 00 for a general description of requirements applying to this section.

1.5 SUBMITTALS

- A. Submit shop drawings in accordance with Section 23 00 00.
- B. Submit shop drawings and descriptive data for all equipment specified in this section.

1.6 SUBSTITUTIONS

- A. The listed equivalent or substituted manufacturers along with the bidding related contractor shall be completely responsible to comply with all requirements on all contract documents. This shall include, but not limited to, space requirements, code clearances, the type, horsepower, capacities, number and size of services required from other trades, including all required ancillary items provided by other trades. If the manufacturer or related bidding contractor does not comply with these requirements, this Contractor shall be responsible for any and all additional costs associated with the changes required by other trades.

1.7 WARRANTY/GUARANTEE

- A. All work and materials are subject to the general warranty as described in the General Conditions of the Contract and in Division 1, General Requirements. In addition, the following special guarantee applies:
 - 1. Each compressor unit shall be provided with manufacturer's five (5) year warranty.

PART 2 – PRODUCTS

2.1 HEAT RECOVERY ROOFTOP UNIT (POOL UNIT)

- A. Manufacturers: Poolpak, Desert Air
- B. GENERAL

- 1. Provide where indicated, factory assembled, enclosed swimming pool environmental control / energy recovery system. System shall include mechanical heat recovery, supply and return / exhaust fans, outdoor, exhaust and recirculated air dampers, pool water heater, moisture disposal

and complete solid-state logic control system, factory installed and wired in a single unit enclosure.

2. The complete unit shall be listed by Underwriter Laboratories under the title of "Special Purpose Air Conditioners" and carry the appropriate label. Underwriter Laboratories listing shall not be required for units equipped with electric, gas or steam auxiliary heat; but these units shall be built in accordance with Underwriter Laboratories requirements.
3. The unit shall be specifically designed, manufactured and tested for enclosed swimming pool duty. Field assembled or modified standard commercial grade equipment is not acceptable. Complete unit shall be weatherproofed for outdoor installation and also suitable for indoor mounting.
4. Manufacturer shall have five years prior experience making similar equipment as described in this specification.

C. Principle of Operation:

1. The unit shall control space temperature and relative humidity, pool water temperature and shall provide controlled ventilation. Warm moist air from the natatorium is drawn over an evaporator coil by the return fan; and the latent and sensible heat is removed from the air. The heat captured by this process and the heat generated from the compressor power consumption are absorbed by a mechanical refrigeration system. The resulting dryer, cooler air is blown into a mixing box. The unit shall include an automatic economizer control function in which the system logic determines what portion, if any, of the "leaving evaporator" air to exhaust from the mixing box and replace with an equal amount of outside air. The selected exhaust air quantity is that which will result in the least electrical power consumption by the unit, based upon a comparison of outside air temperature and humidity, return air temperature and humidity and "leaving evaporator" air temperature and humidity. The air from the mixing box is drawn over a condenser coil and optional auxiliary heating coil by a supply fan.
2. The refrigeration system is activated if either the space temperature deviates from or the relative humidity rises above its setpoint.
3. The unit shall monitor space and outdoor temperature and relative humidity, pool water temperature and building wall temperature.
4. The thermal energy absorbed by the refrigeration system is distributed as follows:
 - (a) First priority is given to maintaining the natatorium space temperature. No supplementary space heating system external to the unit is required.
 - (b) Second priority is given to maintaining pool water temperature.

D. Unit Casing:

1. All panel work and structural steel members shall be of galvanized steel, treated and painted after fabrication but prior to assembly to provide a chlorine and pool chemical resistant finish. The paint shall be plastic epoxy-based powder coating, applied .003 inch (2-3 mils) thick, and baked and bonded at 420°F until it forms a hard vinyl textured surface.
2. Structural steel frame shall be 3/16-inch steel channel base with 3/16-inch steel cross bracing. Vertical support posts for removable panels shall be formed from 16-gauge galvanized steel and painted. All nuts, bolts and lock washers shall be Cadmium plated. All sheet metal screws shall be Empigard coated galvanized steel.
3. Top panels and removable side panels shall be formed from 18-gauge galvanized steel. Access panels shall be secured by two or more key operated latches. All side panels shall be insulated with minimum one-inch duct liner insulation secured to panels by adhesive and panel flanges. The insulation shall be approved for 350°F operating temperature. The fire resistance rating shall

- conform to NFPA Standard 90A and 90B. The thermal conductivity shall not exceed 0.29 BTU/hr/F/sq. ft/in at 75°F. All seams shall be bolted and sealed to prevent leaks. The roof shall be gasketed and secured to frame with Empigard coated zinc treated screws. All nuts, bolts and lock washers exposed to the natatorium air shall be Cadmium plated. All sheet metal screws exposed to the natatorium air shall be Empigard coated galvanized steel.
4. Compressors, pool water heat recovery unit, and controls, including solenoid and expansion valves and refrigerant sight glasses shall be located in compartments isolated from unit air stream.
 5. The unit shall be equipped with two factory mounted terminal blocks, for dual power supply connections, one for the fan and control transformer circuit and one for compressor circuit. The terminal blocks shall be suitable for copper conductors only.
 6. Heavy duty wire guards on condenser coil and fan discharge.
- E. Compressor:
1. The dehumidifier shall utilize a heavy duty industrial semi-hermetic compressor(s) with a total of 3 stages serviceable type with suction gas cooled motor equipped with internal solid state sensor thermal protection, service valves, easily removable external crankcase heater for liquid migration protection, pumpdown cycle protection and oil failure protection.
 2. Capacity control shall be electro-hydraulic, allowing reduced load starting and variable load operation. Capacity control through hot gas by-pass is absolutely not permissible. Forced feed lubrication system shall include self-priming, positive displacement, replaceable oil pump, oil strainer, sight glass and crankcase oil heater. The compressor shall use ring plate suction valves and "discus puck" type discharge valves, large diameter, high strength modular cast iron crank shaft.
- F. Pool Water Heater:
1. Water heater shall be capable of rejecting all the heat recovered from the compressor and the heat recovered in the evaporator.
 2. Pool water heater shall be counter flow, tube-in-tube type. Water side shall be Type L, cupro-nickel. Pool water heater shall be insulated with minimum 1/2 inch closed cell foam. If dehumidifier is located outdoors, pool water condenser shall be equipped with self-regulating electric heat tape for freeze protection.
 3. Pool water condenser shall be a vented double wall with removable heads for inspection and cleaning.
 4. Pool water heating is controlled by a refrigerant solenoid valve which directs hot refrigerant gas into the pool water heater on a call from the control system. Water circuit shall be applied with CPVC pipe stub-outs. Copper tubing and/or fittings in the pool water circuit shall be unacceptable.
- G. Evaporator Coil:
1. Coil shall be constructed of copper tubes, .006 inch thick, copper fins with copper end sheets, frame and intermediate supports. All nuts, bolts and lock washers shall be cadmium plated. All sheet metal screws shall be Empigard coated galvanized steel. Coil construction of dissimilar metals such as copper / aluminum / galvanized steel / stainless steel or plastic / vinyl coated coils shall not be acceptable.
 2. All tubes shall be expanded into fin collars. All joints shall be brazed. The coil shall be tested to 320 PSIG while submerged in water. All brazing shall be done with nitrogen gas inside tubes to give clean internal surfaces. The coil shall be dried and sealed. Its inside shall be commercially free of oxides and foreign matter. Coil assembly shall be 1600 PSIG ultimate strength.

3. The coil shall be sectioned to provide proportional air-to-refrigerant latent and sensible heat removal capacity. This capacity modulation shall be accomplished by utilizing multiple thermal expansion valves (TXV) for the evaporator. Each TXV shall be equipped with a refrigerant flow control solenoid valve and refrigerant sight glass.
- H. Condenser Coil:
1. Condenser coil shall be capable of rejecting all the heat recovered from the compressor and the heat recovered in the evaporator.
 2. The condenser coil shall be constructed of copper tubes, .006 inch thick, copper fins with copper end sheets, frame and intermediate supports. Coil construction of dissimilar metals such as copper / aluminum / galvanized steel / stainless steel or plastic / vinyl coated coils shall not be acceptable.
 3. All nuts, bolts and lock washers shall be Cadmium plated. All sheet metal screws shall be Empigard coated galvanized steel.
 4. All tubes shall be expanded into fin collars. All joints shall be brazed. The coil shall be tested to 400 PSIG while submerged in water. All brazing shall be done with nitrogen gas inside tubes to give clean internal surfaces. The coil shall be dried and sealed. Its inside shall be commercially free of oxides and foreign matter. Coil assembly shall be 2000 PSIG ultimate strength.
- I. Auxiliary Air Heating: The auxiliary air heating shall be provided by two factory mounted, and wired indirect gas fired furnaces. Field installed duct furnaces shall not be acceptable. Unit mounted gas furnaces shall be constructed with 409 stainless steel primary and secondary heat exchangers, spark-ignited intermittent safety pilot with electronic flame supervision, two stage controls, fan control, high limit safety cutout.
- J. Air Filters: The evaporator and condenser coil shall each be protected with a separate upstream air filter system. The filters shall be 2 inch thick, multigraduated, laminated polyester construction, throwaway type. The filters shall have a non-migrating tackifier encapsulated between the second and third laminates. They shall be totally non-toxic, non-allergenic and not support the growth of bacteria and fungus.
- K. Mixing Box: The mixing box shall be integral to the unit and physically located between the evaporator and condenser coils. The mixing box shall be equipped with three dampers to control the amount of exhaust, outside and recirculated air. The exhaust damper shall be downstream of the evaporator coil to allow full heat reclaim prior to exhaust of the air. The air condenser coil shall be located downstream of the outside air intake to allow utilization of outside air when available or necessary.
- L. Louvers:
1. If the dehumidifier is located outdoors, the dehumidifier shall be equipped with a louver and bird screen for both the outside air and exhaust air dampers.
 2. The louvers shall be constructed so as not to reduce the face area of the dampers. The louver and bird screen construction and paint shall be the same as for the dehumidifier casing. The louver and bird screen shall be factory installed.
- M. Dampers: Air mixing compartment shall be provided with opposed blade, less than 1% leakage, neoprene tipped, anodized aluminum air foil cross section dampers. Each damper section shall be operated by a separate motor factory mounted and wired into unit control panel; and be capable of modulating the dampers from 0% to 100%.
- N. Supply Fan and Return Fan: The units shall be factory equipped with a supply fan and a return fan. These fans shall be multi V-belt driven, double inlet centrifugal type with multiblade forward curved wheels. Construction shall be galvanized steel, painted and baked with an epoxy coating providing a

chlorine and pool chemistry resistant finish. The fans shall be dynamically and statically balanced and tested on the shafts. Fan bearings shall be grease lubricated, self-aligning ball bearings selected for 200,000 hours average life.

- O. Fan Motors: Fan motors shall be induction type, totally enclosed fan cooled with Class F insulation, prelubricated ball bearings and shall be mounted on an adjustable base. Motor to be U.L. listed. Supply and return fan motors shall each be provided with individual factory mounted and wired motor starters.
- P. Drain Pan:
 - 1. The floor of each air side section shall be fabricated to be a drain pan. Each drain pan shall be constructed of galvanized steel and powder coat painted after fabrication with a protective coating providing a chlorine and pool chemistry resistant finish. Drain pans shall be fully insulated and piped to a common drain accessible from either side of the unit.
 - 2. If the unit is located outdoors all drain lines within the unit shall be insulated with minimum 3/4 inch closed cell foam with self-regulating electric heat tape for freeze protection.
- Q. Refrigeration Circuit: The refrigeration system shall include a replaceable core liquid line filter dryer, liquid receiver, thermostatic expansion valves, pumpdown solenoid valves, two manual valves to isolate filter drier for fast drier core replacement and manual valves to isolate the liquid receiver. Suction lines shall be fully insulated with closed cell foam insulation. High and low pressure controls and refrigeration service access valves shall be located outside of the air stream. All refrigerant piping shall be copper Type L and is in accordance with "BOCA STANDARDS" ASTM B 88 for Copper Tubing, and M-702.0 for Joints and Connections.
- R. Control Panel:
 - 1. The controller shall be micro computer based, The following functions / setpoints shall be programmable at the panel:
 - a. Air Temperature
 - b. Relative Humidity
 - c. Pool Water Temperature
 - d. Occupied / Unoccupied Schedule
 - e. Damper Positions
 - 2. The following LCD readouts and / or annunciation lights shall be provided:
 - a. Power On
 - b. Space Temperature
 - c. Space Relative Humidity
 - d. Pool Water Temperature
 - e. Pool Water Flow
 - f. Wall Condensation Prevention Temperature
 - g. Outside Air Temperature
 - h. Outside Air Relative Humidity
 - i. Supply Air Temperature
 - j. Damper Position
 - k. Compressor(s) Circuit Fault
 - l. Compressor(s) in Pumpdown

- m. First Stage of Compressor(s) On
 - n. Second Stage of Compressor(s) On
 - o. Third Stage of Compressor(s) On
 - p. Unit in Air Heating Mode
 - q. Unit in Dehumidifying Mode
 - r. Auxiliary Air Heating Coil On
 - s. Pool Water Heating On
 - t. Time of Day / Day of Week
3. Control panel shall be integral to the unit and located in a separate compartment isolated from air flow. Compressors shall be equipped with contactors. Blower motors shall be equipped with motor starters and protected with adjustable magnetic trip overloads. Dry contacts shall be provided for alarm and fan interlock. Power block terminals shall be provided for different wire size connections. Wire shall be numbered and color coded for ease of trouble-shooting. Compressor shall have an anti-recycle timer to prevent short cycling.
 4. The memory of the micro-computer control panel shall have a fault code history log. This fault code history log shall record the last 50 fault codes in the order of their occurrence. Each fault code shall be recorded along with the date and time it occurred. This fault code history log shall be accessible at the control panel, and, for so equipped units, at the remote panel and/or via modem and phone lines.
 5. The dehumidifier control panel shall be capable of being remotely accessed via modem.
 6. All wiring and electrical controls shall be done and installed in accordance with BOCA STANDARD M407.1.
 7. The controls shall continuously monitor the 3-phase power lines for abnormal conditions and detect phase loss even when regenerated voltage is present. The device consists of a solid-state voltage and phase-angle sensing circuit driving an electromechanical relay. When correct voltage and phase rotation are applied, the internal relay will energize. A fault condition shall de-energize the relay; when the fault is corrected the device shall automatically reset.
 8. Remote Control Panel: The dehumidifier shall be remotely monitored and controlled. All setpoints and monitoring functions listed in **CONTROL PANEL section** shall be capable of being remotely controlled and monitored from the remote terminal and simultaneously at the dehumidifier control panel. Remote monitoring and controlling shall be accomplished by a remote CRT with keyboard (provided by the dehumidifier manufacturer) and via an auto-answer, 1200 BAUD modem (by dehumidifier manufacturer) and an electronic data transmission quality telephone line located at the remote terminal location (by owner). The remote terminal will be linked to the dehumidifier control system by a shielded 2 wire cable (18 gauge) standard copper up to 2000 feet (by dehumidifier manufacturer).
- S. Control Sensors:
1. The unit shall be provided with the following factory mounted and wired control sensors:
 - a. Space Dry Bulb Temperature
 - b. Space Relative Humidity
 - c. Air-Leaving-Evaporator Dry Bulb Temperature
 - d. Air-Leaving-Evaporator Relative Humidity
 - e. Pool Water Temperature

- f. Supply Air Dry Bulb Temperature
- 2. The unit shall be delivered with the following factory supplied sensors to be installed in the field by the unit manufacturer:
 - a. Outside Air Dry Bulb Temperature
 - b. Outside Air Relative Humidity
 - c. Natatorium Wall Condensation Prevention Temperature Sensor
- T. Environmental Logic Controls:
 - 1. All operating and logic controls shall be factory mounted and wired in the unit. Control sequences shall be designed specifically to control swimming pool environmental conditions by the unit manufacturers.
 - 2. At a minimum, control system shall provide full modulation of heat recovery / heating system by proportional control of dry bulb temperature, relative humidity, cold-wall surface condensation prevention humidity reset and ventilation air volume.
 - 3. Controls shall automatically operate heating, dehumidification and heat recovery system in response to greatest requirement and adjust unit outputs to maintain building conditions. Unit and controls shall be capable of providing full heating capacity to either air or water. Controls shall be capable of proportional control of heating and dehumidification by loading stages of compressor capacity as necessary. As building requirements are satisfied, unit shall unload and shut off. At a minimum, unit shall provide the following functions:
 - a. Economizer/Ventilation: Providing outdoor air ventilation as a function of indoor and outdoor conditions. The economizer shall operate in either the space heating, space cooling, space heating and dehumidification or space cooling and dehumidification mode.
 - b. Occupied / Unoccupied Control Mode: Time clock for 7-day, 24-hour operation controlling the unoccupied mode operation during heating season. During unoccupied times the outside air and exhaust dampers stay in closed position to minimize the air heating load.
 - c. Space Heating: Full proportional control of space dry bulb temperature by staging compressor loading of unit capacity, with humidity override. Automatic mechanical heat recovery from pool room return air as required by building and / or water temperature. Return / exhaust air must pass through mechanical heat recovery system and shall be exhausted at its lowest heat content. Automatic switching and three (3) stage outputs for control of auxiliary air heating coil shall be performed.

Condition	Action
At Setpoint	Ventilation
At a drop from setpoint	Economizer if outdoor temperature is higher than return air.
At further drop from setpoint	Valve directing hot gas to air condenser energized. First and successive stages of compressor energized. Smart Economizer

Auxiliary air heating shall be controlled in two (2) stages as follows:

1st stage: energize gas furnace(s) on low fire

2nd stage: energize gas furnace(s) on high fire

- d. Smart Economizer: The Smart Economizer is the simultaneous operation of the Heat Recovery Heating and Economizer modes.

Condition	Action
Natatorium requires dehumidification and/or heating and the outside air dry bulb and dew point are warmer and dryer, respectively, than the air off the evaporator coil	100% of the air from the evaporator is exhausted. 100% warm dry air is drawn into the PoolPak with its supply fan. The warm dry outside air is heated further as it passes over the condenser coil and supplied to the natatorium.

- e. Pool Water Heating: If the space temperature is at or above setpoint and the pool water temperature is below the setpoint, hot gas is directed to the pool water condenser when the compressor is running. At other times the pool water requires heat, the PoolPak activates the main pool water heater.

- f. Humidity Control The economizer is activated if dehumidification is required and:

- (1) the air and water temperatures are satisfied, and
- (2) the absolute humidity of the outside air is lower than the absolute humidity of the pool room air, and
- (3) the outside air temperature will not adversely effect the pool room air temperature.

If outside air cannot be used for dehumidification, then full proportional control of relative humidity is done by staging unit capacity. Humidity controller energizes the compressor and directs hot gas to the air condenser if space needs heating or water condenser if pool water temperature is below setpoint.

If dehumidification is required and the air and water temperatures are satisfied and the outside air cannot be used to dehumidify the pool room and Flywheel Air Conditioning is not enabled, then the hot gas is directed to the external air cooled condenser, chilled water or cooling tower condenser or the auxiliary chilled water coil is activated, if so equipped.

Condition	Action
At Setpoint	Ventilation
At a rise from setpoint	Economizer if outdoor dew point is lower than return air dew point.
At further rise from setpoint	Valve directing hot gas to air condenser, pool condenser or ext. air-cooled condenser energized. First and successive stages of compressor energized. Smart Economizer

- g. **Condensate On Walls:** When the temperature of the interior surface at the wall sensor drops to within 5°F of the dew point temperature of the space air, the relative humidity setpoint is offset downward. This condition causes the dehumidifier system to activate humidity control lowering the space dew point and hinders the formation of condensation on the cold wall surfaces.
- h. **Air Conditioning: Flywheel Air Conditioning**
 - (1) This air conditioning control strategy uses the thermal storage capacity of the swimming pool. During occupied times the PoolPak cools the Natatorium air by removing the sensible and latent heat from the air in the evaporator. This heat is put into the pool water. The pool water's temperature is allowed to rise a maximum of 2°F above its normal setpoint. Automatic staging of cooling capacity is in response to air conditioning load.
 - (2) During the unoccupied time, if the pool water is above its setpoint, full ventilation is used to evaporatively cool the pool. This mode of operation continues until either the pool water goes 1° F below its setpoint or an occupied period starts.
 - (3) The changeover from heating to air conditioning as a function of dry bulb cooling demand in the Natatorium is automatic. A normal changeover deadband of 1.5°F between heating and cooling is used.
 - (4) This cycle is repeated as long as the requirement to provide air conditioning during the occupied periods exists.
- U. **Operating and Safety Controls:**
 - 1. Each unit shall be provided with a complete operating and safety logic control system. The control system shall shut down the compressor in case of high refrigerant pressure, low refrigerant pressure, oil failure, and / or high motor temperature conditions. The complete unit (fans & compressor) shall be shut down to protect the motors if power line abnormalities occur.
 - 2. Operating and safety control system shall include all relays, contactors, sensors and switches necessary to operate complete unit.
- V. **Manufacturer:**
 - 1. Unit shall be base bid with specified PoolPak, Inc. - PoolPak SWHP 100. Moisture removal rate shall be a minimum of 117 pound/hr.
- W. **Installation:**
 - 1. Comply with manufacturer's printed instructions except where more stringent requirements are shown or specified, and except where manufacturer's technical representative directs otherwise.
 - 2. Install unit where shown on drawings. Provide three feet clearance around sides and four feet around compressor compartment of unit for air flow and service.
 - 3. Provide and install all water piping, drains and controls for proper operation of unit.
- X. **Start-Up:**
 - 1. Start-up service shall be provided by the equipment manufacturer's authorized representative and shall include complete testing of all controls and unit operation. The agency responsible for start-up shall record the refrigeration pressures and electrical operating data. Copies of this data are to be supplied to the owner.
 - 2. All units shall be thoroughly cleaned by the installing contractor in accordance with the manufacturer's instructions prior to being placed into service.

3. A complete operating and maintenance manual, including wiring diagrams, start-up and operating sequence and material list shall be provided to the owner.
 4. The owner shall be provided with complete instruction of operating and maintenance procedures.
- Y. Warranty:
1. One-year parts and material and labor warranty on the entire unit.
 2. Drive Line Warranty - A four-year extended parts warranty shall be provided on the:
 - a. Compressors
 - b. Compressor Motor Contactors
 - c. Return Fan Motor
 - d. Return Fan Motor Starters
 - e. Supply Fan Motor
 - f. Supply Fan Motor Starters
 - g. Pool Water Condenser
 - h. Pool Water Condenser Solenoid Valves & Coils
 - i. Liquid Expansion Solenoid Valves & Coils
 - j. Air Condenser Solenoid Valves & Coils
 - k. Blowers, Wheels & Housings
 3. A nine-year extended parts warranty shall be provided on the all-copper evaporator, condenser and auxiliary hot water heating coils.
 4. These warranties are contingent on proper maintenance of pool water chemistry including a pH of between 7.2 to 7.6, Free Chlorine not exceeding 2.0 ppm and Combined Chlorine not to exceed 0.5 ppm. These parameters are to be measured and recorded daily and be available for review upon request.
 5. AutoGuard Service - For units equipped with a modem and phone line, the manufacturer shall call the unit once a week for the first two years and download the fault code history log as well as review the performance and status of the unit. If a problem is detected, the manufacturer's service department shall call the owner's representative to further diagnose and solve the problem.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Verify that coils, filters, motors, drives and other components are matched with the proper unit.
- B. Assemble unit components following manufacturer's instructions for handling, testing and operating. Repair damaged galvanized areas, and paint in accordance with manufacturer's written recommendations.
- C. Vacuum clean interior of units prior to operation.
- D. Repair air leaks from or into casing that can be heard or felt during normal operation.
- E. Perform field mechanical balancing in accordance with Section 23 05 93.
- F. The Mechanical Contractor shall own as a part of his work, the following:
Provide one (1) additional drive set, if necessary, to obtain final design balancing requirements. The Mechanical Contractor shall coordinate with Balancing Firm and equipment manufacturer for drive selection, including belts and pulleys.

END OF SECTION