



PRODUCT SPECIFICATION GUIDE
MODEL POLLUTION CONTROL UNITS POWER PLAY

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Provide Power Play electrostatic precipitator (ESP) that is two stage, dual voltage, plate type, and sized to clean the airflow capacities scheduled on the Contract Documents at a minimum efficiency of 95% when tested per MIL-STD- 282, DOP Smoke Penetration Method.

Construction

The system shall be furnished as a single, factory assembled unit, consisting of: aluminum mesh pre-filter, ionizer-collector cell, mist eliminator, safety bag filter, odor control section, outlet transition and exhaust fan, all mounted on a 6” x 10.5 lb./ft. structural steel support base. The base shall have lifting lugs at the 4 corners and along the length as needed. The unit shall be furnished in a side access housing, fabricated from 14 gage steel, continuous welded, pre-treated and powder coated with thermo-set paint, inside and outside. Tool less side access doors shall be provided to service all internal components. The access doors shall be on lift-off hinges, full perimeter high temperature gasketed and use multi-point closure latches. The system shall be ETL listed to UL 710 standard for Exhaust Hoods for Commercial Cooking Equipment and shall conform to NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.

The pre-filter section shall consist of a 2” thick aluminum mesh roughing filter.

Ionizing-collecting cell(s) shall be of industrial design integrity and single unit construction. The cell(s) shall be all aluminum construction except the ionizing electrode shall be of the rigid stainless steel type. Repelling and collecting plates shall be positively retained in place using tie rod and tubular spacer design. High voltage insulators shall be molded from structural, self-glazing ceramic; shall contain no appurtenances; shall be of radial and bilateral symmetry; and shall contain no high voltage penetrations.

Detergent, wash and rinse water shall be applied by oscillating copper manifolds containing brass spray nozzles, located on both the entering and leaving air side of each cell tier. Complete, effective washing of all ionizing-collector cell surfaces and all appurtenances shall be provided. Drive motors, used to oscillate the manifolds shall be high torque, gear reduced, totally enclosed fan cooled type, and be permanently lubricated. Drive linkage shall be the rigid, positively fastened type without tracks or sprockets. The unit shall be furnished with a sloped bottom drain pan for removal of waste water.

A detergent dispenser assembly shall be provided and shall consist of a 55 gallon anticorrosive reservoir, positive displacement pump, motor, and flow volume control valve. Solenoid valve, strainer, backflow preventer, ball valve, pressure gage and an initial supply of detergent concentrate shall be furnished by the unit manufacturer.

Mist eliminator shall consist of a 2" thick aluminum mesh filter.

The safety bag filter(s) shall be 15" deep with a media surface area of 49 ft²/1000 cfm. Filter(s) are of high-density glass microfiber media with galvanized steel headered frame, are rated UL Class I, with an efficiency of 95% per ASHRAE Standard 52.1-92. Filter(s) are held in position by integral extruded aluminum tracks with nylon pile seal gasketing.

The odor control section shall contain bonded activated carbon filters, furnished in a self-supporting, bonded granular briquette panel with galvanized steel perimeter frame and covered on both sides with spun bonded scrim. Carbon is composed of virgin coconut shell granular activated carbon with a minimum carbon tetrachloride activity of 60% per ASTM D-3467, is a 4 x 8 US mesh size, and impregnated with active ingredients to enhance cooking odor molecule adsorption. Bonded carbon shall have a minimum bulk density of 39 lbs/ft³, and applied at a minimum rate of 156 lbs. per 1,000 cfm, for a minimum residence time of 0.15 seconds. Carbon panels shall be held in place with extruded aluminum tracks with replaceable bulb seal gasketing to prevent air bypass.

Outlet transition shall be factory installed, connecting the housing to the blower, fabricated from 14 gage steel and finished to match the housing. Transition to blower connection shall be made with high temperature flex fabric.

Fan assembly shall be the centrifugal utility set or tubular inline type, belt driven with backward inclined wheel and shall be UL 762 listed for Power Ventilators in Restaurant Service. A NEMA 3R ON-OFF disconnect switch shall be provided on the fan housing. A motor starter is to be provided with unit. The fan assembly shall be mounted on housed, spring isolators.

The System Control shall be the programmable logic controller (PLC) type, furnished in a NEMA 12 enclosure, pre-programmed to sequence the wash cycle of the ionizer collector cell(s) at a schedule to be determined with the Owner. Integral electronic time clock with manual override shall be provided. System control face panel shall contain LED indicating lights (consisting of run, wash, low detergent, and primary/secondary voltage indicators), manual override pushbutton, emergency stop push button, operator interface panel, and disconnect switch.

High voltage Power Pack, furnished in a NEMA 1 enclosure, shall be the high frequency, solid state type, supplying a dual voltage output specified by the unit manufacturer. Power Pack supply shall have a regulated input and output for line fluctuations of 10% and shall have a current limiting shutdown and restart feature. The Power Pack face panel shall contain primary and secondary voltage LED indicating lights, digital voltage/current meters and on/off switch.

All access to ionizer collector cell and high voltage Power Pack shall contain electrical safety interlocks which de-energize the primary power circuit prior to accessing high voltage.

Fire system shall be Amerex or Ansul with factory installed detector and pre-piped nozzles. Detector and nozzle arrangement shall be according to the respective manufacturer's instructions. 3/8" IPS field connection, tanks, controls, and commissioning of the fire system shall be provided on site by others. The local code authority may require other protection in order to comply with local codes.

Due to continuous research Accurex reserves the right to change specifications without notice.