RUKS ENGINEERING LTD

TECHNICAL SPECIFICATIONS
RUKS ODOTRON

1. Shall comprise individual compartments for Ozone Generator, Fan, and Electrical / Instrumentation Components.
2. Ozone Generator Compartment shall comprise set of multi plate, double sided corona discharge plates operating in unison to produce adequate quantity of ozone at medium concentration.
3. Material of construction of all parts shall be Stainless Steel.
4. The system shall not require any replacement consumable except air filter, and maintenance shall be minimum or near zero subject to timely replacement of intake air filter to the unit.
5. Feed air for ozone generation shall be plant room air. Use of annular tube type corona with compressed air as feed gas is not permissible, so as to prevent deposition of nitrogen oxides on the corona surface. To minimize maintenance cost, labor and time, and operational consumable, use of oxygen feed system is not permissible.
6. The ozone generating corona and ozone wetted parts shall be confined in a fully welded stainless steel enclosure to prevent ozone leaks. It shall be provided with openable glass or plexi glass panel for inspection of corona plates while the equipment is in operation. The outer enclosure of the equipment shall be provided with lockable doors to provide easy access to the glass ispection panel.
7. The corona chamber shall not have any trace of exhaust air while it starts and operates. Necessary ROHS compliant and UL lsited electrical relay shall be provided to ensure this safety feature.
8. The electrical compartment shall be isolated from all other compartments, and rated to NEMA 4X (IP 66).
9. The transformer shall be electrical induction type, UL listed. It shall not damage, burn, or elevate in temperature even if short circuit occurs. Shall revert to normal operation upon removal of short circuit. The transformer shall be fully encapsulated and housed in metalic enclosure for safety against moisture and water impregnaiton.
10. Passage of high voltage conductors across metalic enclosure shall be through UL listed liquid tight connectors.
11. **The equipment shall be UL listed.**
12. **Where used to deodorize Kitchen Exhaust Air, the equipment shall be compliant to NFPA 96, subject to field provided fire damper at exit of the equipment.**
13. When used for deodorization of exhaust air from WWP/STP, system compliance to NFPA 820 or classified area (Class 1, Div 1 II) shall be attainable by installing the equipment outside the plant room and by duct conneciton to exhaust air from the plant room.
14. High voltage cable shall be silicon insulated, ozone and corona resistant, rated for 20 KV, and UL listed with UL flame test rating.

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15. Following accessories shall be provided in the electrical compartment;
    a. UL listed Manual Regulator to modulate produciton of ozone.
    b. UL listed Hour Meter housed in NEMA 4 enclosure for timely maintenance.
    c. Air Pressure Manometer for measurement of air pressure in fan chamber.
    d. UL lsited switches such as DPST Main On Off Switch, Fan On Off Switch, Indicating Lamps, and Terminal Block.
16. Fan chamber shall comprise backward curved non overloading fan driven by thermal protected, UL listed TEFC motor to inject ozonized air into exhaust air stream. External static pressure of the fan shall be rated for injection into airstreams from 0.25" WG (60 Pa) upto 2" WG (500 Pa). Air intake shall be through grille with filter track and UL listed MERV 11 filter.
17. Contact Chamber of stainless steel construction of adequate volume shall be field or manufacturer provided for design contact volume.
18. As optional item and if called for, Ozone Monitor shall be provided to display ozone concentration in exhaust air to OSHA mandated level. It shall comprise Relay potential free dry contact rated for 250 V, 10 Amps AC/DC. The monitor shall display alarm condition and relay condition. It shall have 0 to 10 VDC analog output for BMS interface. The monitor shall be UL listed to UL 867A.
19. The system shall be rated for operation on 110/120 V (220/240 V), 1 Ph, 50/60 Hz (Please specify).
20. Option; Control Panel with odor/VOC Monitor (or H2S Monitor for WWP/STP), DLC Controller, and Ozone Monitor for automatic modulation. Delivers 0 – 10 VDC for BMS interface. Option for remote monitoring of odor (VOC) or H2S and residual ozone level through web based internet protocol
21. The Equipment shall be of North American manufacture, with parts and components from USA and Canada.

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