

RUKS ENGINEERING LTD

TECHNICAL SPECIFICATIONS RUKS ODONASH

1. Material of construction of all parts shall be Stainless Steel.
2. Shall comprise individual compartments for Ozone Generator, Fan, Electrical / Instrumentation Components., and Sewer Vent Air Extraction Fan.
3. Ozone Generator Compartment shall comprise set of multi plate, double sided corona discharge plates operating at high voltage, to produce adequate quantity of ozone at medium concentration.
4. The system shall not require any replacement consumable except air filter, and maintenance shall be minimum subject to timely replacement of intake air filter to the unit.
5. Feed air 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 inspection panel.
7. The corona chamber shall not have any trace of exhaust air while it starts and operates. Necessary ROHS compliant and UL listed 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 metallic enclosure for safety against moisture and water impregnation.
10. Passage of high voltage conductors across metallic enclosure shall be through UL listed liquid tight connectors.
11. High voltage cable shall be silicon insulated, ozone and corona resistant, rated for 20 KV, and UL listed with UL flame test rating.
12. Following accessories shall be provided in the electrical compartment;
 - a. UL listed Manual Regulator to modulate production 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 listed switches such as DPST Main On Off Switch, Fan On Off Switch, Indicating Lamps, and Terminal Block.
13. Fan chamber shall comprise backward curved non overloading fan driven by thermal

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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.

14. Sewage Vent Air Fan shall be of non sparking, polypropylene material. Shaft shall be of Stainless Steel. The Motor shall be TEFC and UL listed. The Motor shall be outside the vent air stream.
15. Following materials may be field provided or factory provided as specified;
 - a. Duct from sewer wells to vent air fan, material PVC or Stainless Steel
 - b. Vent air discharge duct from fan to contact chamber, material PVC or Stainless Steel
 - c. Interconnect duct from ozone generating equipment to discharge duct from vent air fan, material PVC or Stainless Steel
 - d. Contact Chamber to provide adequate contact time, material Stainless Steel or PVC
16. As Optional Item, Control Panel for automatic control of the system shall be provided if specified. This shall comprise;
 - a. Control Panel fabricated to NEMA 4X
 - b. H2S Monitor Model CZ10 or as specified
 - c. DLC Controller Model CZ6-CX for automatic modulation of ozone production
 - d. Residual Ozone Monitor Model CZ12 listed to UL 867A
17. The Equipment shall be of North American manufacture, with parts and components from USA and Canada.