



RUKS ENGINEERING LTD

Odor Depleting System

RUKS ODOTRON



APPLICATIONS

Deodorization of Exhaust Air From
Sewage / Waste Water Treatment Plant Rooms
Lift Wells / Headwork Station Plant Rooms
Food Processing Plants
Kitchen Exhaust Air Hoods
Garbage Rooms
Building Services



PATENT PENDING

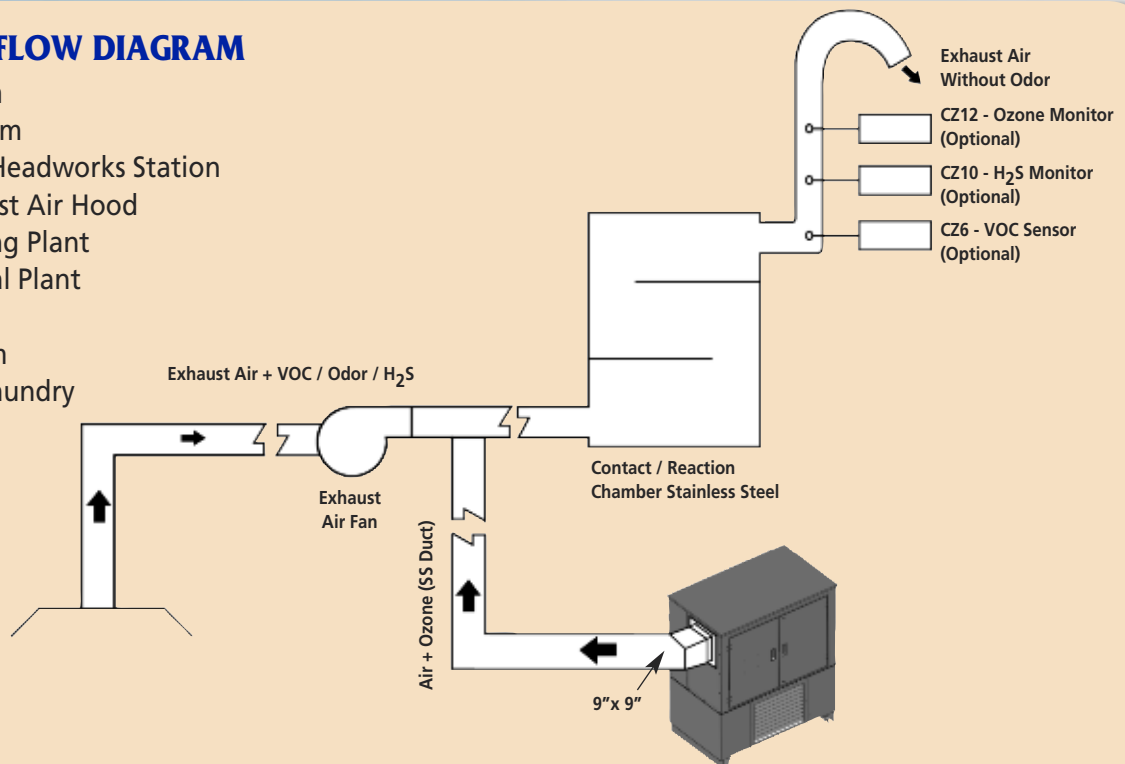
FEATURES OF ODOTRON

- Packaged Equipment with all Parts, Components and wiring, factory assembled.
- Stainless Steel Construction.
- Maintenance labor, time, and cost are very low to almost none.
- Site provided materials are minimum; interconnect ducts, Contact Chamber, and field wiring.
- Ready to start with minimum preparation time and labor.
- Very low Operating Cost.
- Does not require air compressor. No deposition of Nitrous Compounds on Corona Surface. Periodic replacement of Corona Cells – Not Required.
- Does not use oxygen. No consumables such as molecular sieve, or filter cartridges.
- Does not require replacement consumable, except air filter.
- Eliminates high Operating and Maintenance Cost.
- Very effective in odor removal.
- Backward curved, non overloading, high pressure fan driven by UL listed TEFC motor to enable injection of Ozonized air to exhaust air stream.
- Multiple, Double Sided, Corona Plates, operating in unison provide adequate quantity of ozone at medium concentration, for rapid removal of odor.
- Ozone cells driven by failsafe, fully encapsulated, Transformer. Secondary Windings do not damage even if short circuit occurs, or exposed to moisture. Reverts to use upon removal of short circuit.
- Isolated compartment for Ozone Generating Cells, Fan and Electrical Components.
- Built in Relay ensures no Exhaust Air is present in the Corona Compartment, during start or operation of the corona cells. Assures safety.
- Ozone Monitor deactivates generator cells if ozone concentration exceeds regulatory mandated or user set level. Fully compliant to OSHA, NIOSH, and Regulatory Codes. Optional if ordered.
- 0 – 10 VDC Analog Signal from VOC/odor, and ozone in exhaust air Monitor to BAS/BMS (optional).
- UL Listed.

SCHEMATIC FLOW DIAGRAM

Exhaust Air From

- WTP / STP Room
- Lift Well and Headworks Station
- Kitchen Exhaust Air Hood
- Food Processing Plant
- Pharmaceutical Plant
- Animal House
- Garbage Room
- Commercial Laundry



ODOTRON 6

Electrical Input (Domestic)
FLA (Not Greater Than)
Electrical Input (Export)
FLA (Not Greater Than)

120 V, 1 Ph, 60 Hz
12 Amps
230 V, 1 Ph, 50 Hz
5 Amps

ODOTRON 12

120 V, 1 Ph, 60 Hz
15 Amps
230 V, 1 Ph, 50 Hz
7 Amps

ODOTRON 24

120 V, 1 Ph, 60 Hz
20 Amps
230 V, 1 Ph, 50 Hz
9 Amps



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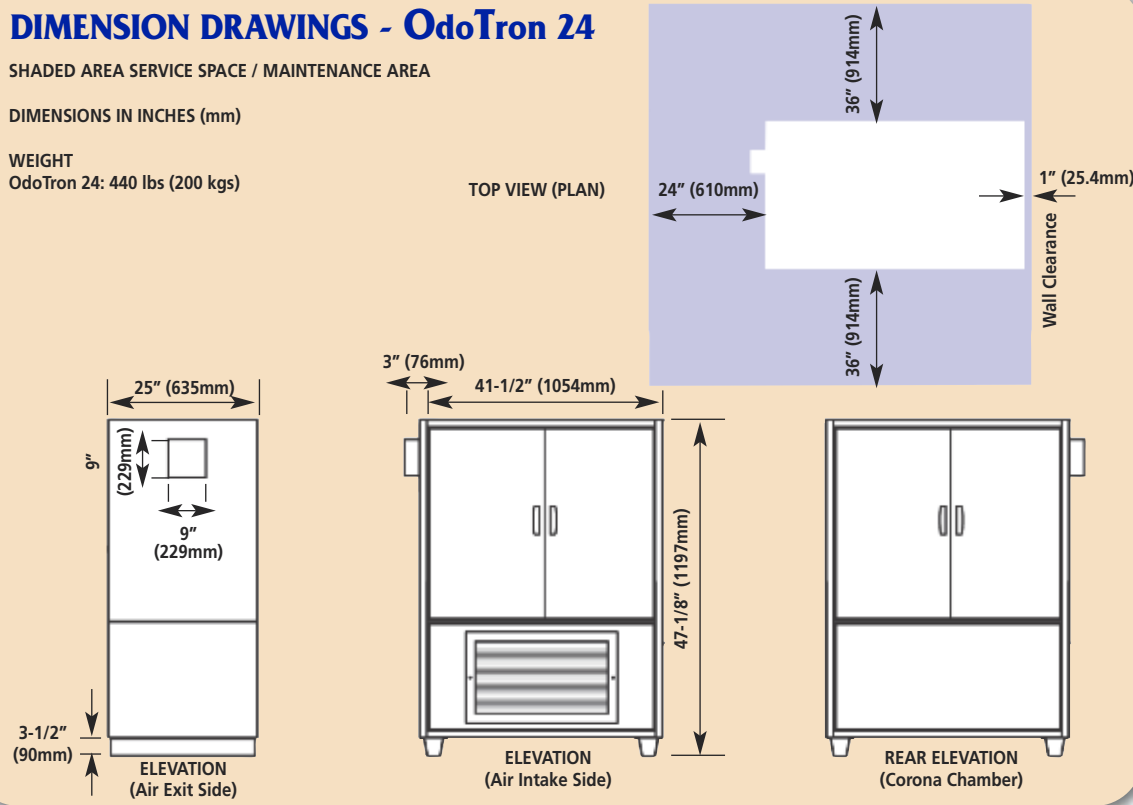
DIMENSION DRAWINGS - OdoTron 24

SHADED AREA SERVICE SPACE / MAINTENANCE AREA

DIMENSIONS IN INCHES (mm)

WEIGHT

OdoTron 24: 440 lbs (200 kgs)



DIMENSION DRAWINGS - OdoTron 6/12

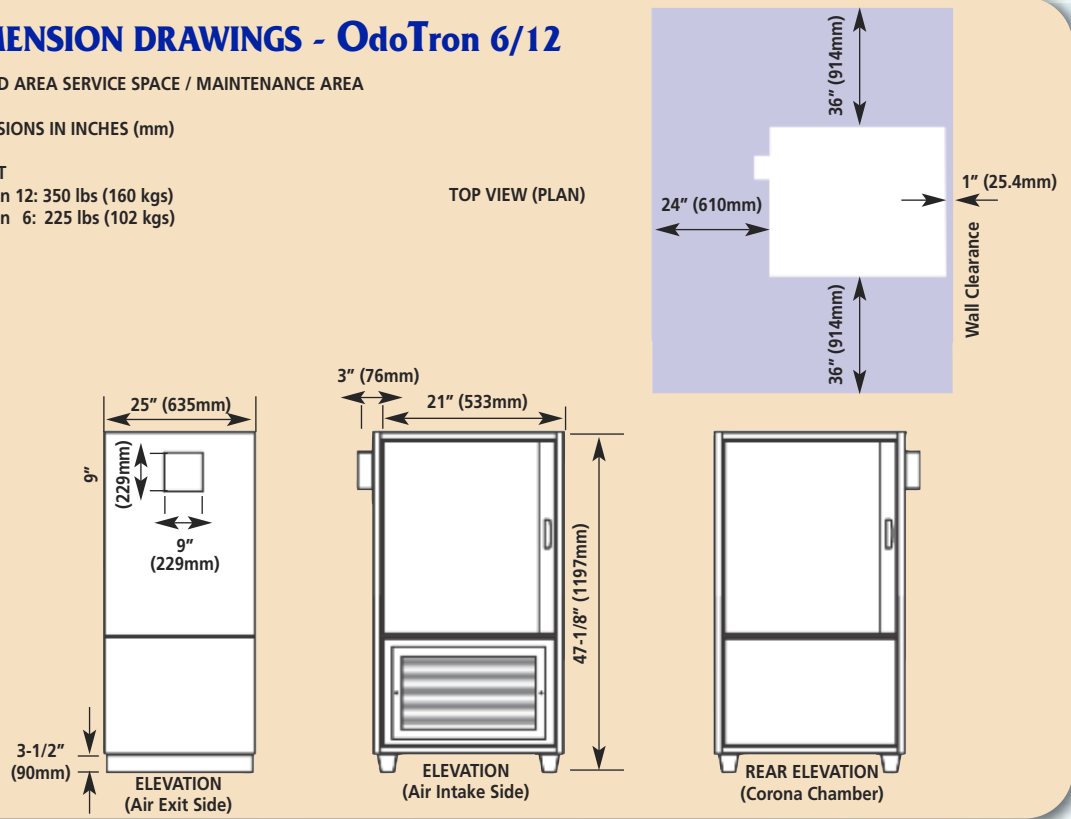
SHADED AREA SERVICE SPACE / MAINTENANCE AREA

DIMENSIONS IN INCHES (mm)

WEIGHT

OdoTron 12: 350 lbs (160 kgs)

OdoTron 6: 225 lbs (102 kgs)



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* The health aspects associated with the use of this product and its ability to aid in disinfection of environment air have not been investigated by UL.

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TECHNICAL SPECIFICATIONS OF RUKS ODOTRON

1. Material of construction of all parts shall be Stainless Steel.
2. Shall comprise individual compartments for Ozone Generator, Fan, and Electrical / Instrumentation Components.
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 or near zero 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. **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. High voltage cable shall be silicon insulated, ozone and corona resistant, rated for 20 KV, and UL listed with UL flame test rating.
14. 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.
15. 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.
16. Contact Chamber of stainless steel construction of adequate volume shall be field or manufacturer provided for design contact volume.
17. 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.
18. The system shall be rated for operation on 110 / 120 V (220 / 240 V) 1 Ph, 50 / 60 Hz (Please specify).
19. Automatic Modulation (Option if specified) Regulation for automatic modulation of ozone generator;
 - a. A VOC Sensor (or H₂S Sensor for Sewage / Waste Water Treatment Plants) shall be shipped for field installation to detect level of VOC (or H₂S) in the air exhausted from contact chamber. It shall deliver 0 to 10 VDC Analog Signal to Auto Controller to modulate production of ozone in relation to level of VOC (or H₂S) in the exhaust air (option)
 - b. Change over switch for Auto/Manual Operation (option)
20. The Equipment shall be of North American Manufacture, with parts and components from USA and Canada.



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INTERNATIONAL SALES AND DISTRIBUTION:

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