TRION®

Indoor Air Quality


Installation
Operation
Maintenance
Parts
Manual

READ AND SAVE THESE INSTRUCTIONS

# Air Boss® Model 38 Series

Industrial Mist Precipitator

# INDUSTRIAL MIST PRECIPITATOR
# TYPE IMP
# AIR BOSS® MODEL 38 SERIES

## TABLE OF CONTENTS

## I. PRINCIPLE OF OPERATION & GENERAL DESCRIPTION

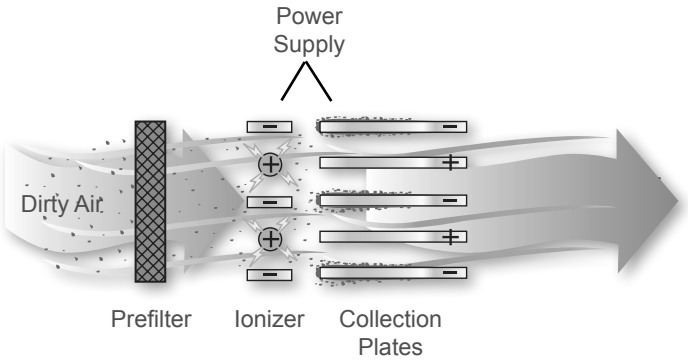
The TRION Industrial Precipitator is a two-stage, dual voltage, electronic air cleaner designed to remove particulate matter from gas.

In the first stage of operation, the particles to be collected pass through an ionizer where they are electrically charged, by a corona discharge, regardless of their size. In the second stage of operation, these charged particles pass into a collector where they are electrically attracted and collected.

The ionizer consists of electrically charged, 24 Ga. stainless steel spiked blades supported between grounded electrodes. The collector consists of a series of parallel plates arranged so that each alternate plate is electrically grounded. The charged plates are of the same polarity as the ionizing bladed and charged particles so that they repel, while grounded plates, being of opposite polarity, attract.

Three distinct functional components comprise the complete cleaner:

1. An ionizer to ionize the particulate matter in the gas.
2. A collector to collect the ionized particles.
3. A power supply to furnish the high voltage direct current required by the ionizer and collector.




Usually, this particular model series is applied to collect particulate matter in the form of mist. When collected, the particles coalesce into liquid droplets of adequate weight causing them to roll off the vertically positioned collector plates where they drain away to a predesignated location.

The ionizing and collecting sections are primarily constructed of aluminum, can be easily handled, and slide into the cabinet like drawers. A perforated steel baffle, located on the discharge side of the collector section, provides protection especially on units installed with an open discharge. The baffle also slides into the cabinet like a drawer. All three of these components are accessible through a single, side mounted, access panel.

Internally, the following materials are exposed and subjected to the gas flow through the cabinet:

- Aluminum
- Stainless Steel
- Mild Steel
- Silicone Rubber
- Nylon
- Glass Fiber Reinforced Polyester

The steel cabinet contains two pre-drilled mounting bars. Depending on the specifications, the cabinet is provided with pipe flanges, both on the inlet and the outlet for “in-line” installation or with a pipe flange on the inlet and an open outlet for free discharge installation. The inlet flange contains a flame arrestor which serves as a strainer as well as protection against any possible flaming caused by arc over in the collector. The flame arrestor is required on all applications using the Model 38. Appropriate location placement for the piping/threaded filter type must be included for system protection. This arrestor must be ordered separately.

The power supply is contained on the unit access panel in a weatherproof enclosure. It converts the alternating current input into the high voltage direct current necessary to energize the ionizing and collecting sections. Supply line power is connected to the unit in a weatherproof junction box (IP-54) and is delivered to the transformer primary through an oil proof cable connected to the enclosure through a quick connect fitting. In addition to the necessary high voltage components, the secondary contains a pilot light to indicate proper operating voltages. For 220-240 VAC units, a 1.2 Amp fuse is installed for added protection in the terminal block in the field wiring junction box. The TRION part number for the 5 mm x 20 mm fuse is 151678-001.

## II. INSTALLATION

### A. UNPACK

Normally, the shipment is packaged in one container including the entire unit, completely assembled and with instructions. Any shipping damage noted upon receipt should be immediately referred directly to the carrier and a claim filed. When receipt has been cleared, all crating and blocking used in shipment should be carefully removed.

### B. SELECT MOUNTING LOCATION

Consideration must be given to three main points when selecting the mounting location.

#### i. Temperature

The temperature of the gas flow through the precipitator must not exceed +160 degrees F and also be low enough so that all vapors and/or mists have fully condensed into particulate matter prior to entering the unit. The purpose may be defeated if warm materials pass through the unit in a gaseous state, then condense into mist down stream from the collector element. Adequate duct runs between the contaminate and the precipitator, or a chill means, must be provided to lower the gas temperature to a satisfactory point. The minimum temperature to which the unit should be exposed is +20 degrees F.

#### ii. Positioning

Although the unit will operate in any position, it is primarily designed for vertical upflow. The important factor to keep in mind when positioning is the adequate drainage of collected materials and with the unit in the vertical upflow position, this feature is best facilitated.

#### iii. Service Access:

Adequate space should be provided in front of the access panel for ease in access panel and internal component removal.

### C. INSTALLATION OF PRECIPITATOR

1. Disconnect primary cable from power pack.
2. Remove access panel hardware and panel. Place in safe location being careful not to deform the high voltage spring contacts in the under side.
3. Remove flame arrestor, ionizer, collector and outlet baffle and place them aside with access panel if flange type filter unit.
4. The internal surfaces of the cabinet are treated with a light-weight oil to protect the unpainted metal from rust and corrosion prior to packing for shipment. The preserving oil should be thoroughly flushed away with an adequate solvent prior to mounting.
   a) Refer to Drawings for mounting bolt hole dimensions.
   b) Be sure flame arrestor is properly installed in inlet flange before connecting the mating flange of the adjoining duct run.
   c) If a threaded/pipe type filter, install arrestor in inlet piping where a flange connection exists to install/ access the inlet ducting.
5. Thoroughly clean all installation dirt from the cabinet, then reinstall ionizer, collector and outlet baffle.
6. Reinstall and secure access panel.

### D. WIRING

Connect alternating voltage as specified through a service switch, to the connections provided in the junction box located on the side of the unit. Refer to the electrical parts list and schematic.

**WARNING**

**THIS APPLIANCE MUST BE EARTHED.**

**WARNING**

**THIS UNIT IS INTENDED TO BE PERMANENTLY CONNECTED TO FIXED WIRING. IT SHALL BE PROVIDED WITH A MEANS OF DISCONNECTION FROM THE SUPPLY HAVING A CONTACT SEPARATION OF AT LEAST 3 MM IN ALL POLES. THE MEANS OF CONNECTION IS NOT FURNISHED WITH THE UNIT.**

## III. OPERATION

Energize the unit. The pilot light should glow, indicating the ionizer and collector are correctly powered. Arcing and cracking accompanied by a flickering of the pilot light may be noted when the unit is first energized. If it occurs, it is probably due to some small amount of foreign material in the system or collector and should quickly subside. If the pilot light is dim, or does not glow, when the unit is energized or prolonged, arcing occurs, refer to Troubleshooting, page 5.

## IV. MAINTENANCE

**NOTE: EXERCISE THE NORMAL PRECAUTIONS WHEN WORKING WITH HIGH VOLTAGE.**

**WARNING**

**HIGH VOLTAGE IS PRESENT INSIDE CABINET. DO NOT DEFEAT COVER INTERLOCK ARRANGEMENT. ALWAYS DISCONNECT FROM SUPPLY AND WAIT ONE MINUTE BEFORE PERFORMING SERVICE WITHIN THE CABINET.**

The precipitator, when applied to liquid particulate matter, is self-cleaning to a degree. The continual run-off of collected material provides a cleaning action. Periodically, however, the components should be inspected and cleaned.

Depending on the type and amounts of materials collected, the various components become dirty in different periods of time. Frequent inspection after initial start-up is best practical method to establish a routine maintenance schedule for any given material being collected.

To remove components:
1. Disconnect primary cable at fitting on power pack.
2. Remove access panel hardware and remove access panel. When removing and placing it down, be careful not to deform the high voltage contacts located on the under side.
3. Pull components from cabinet. Place on smooth flat surface to avoid deforming.

Any coatings of contaminant build-up on ionizing blades can normally be removed with a small amount of solvent applied with a cloth. Exceptionally stubborn coatings on blades may require removal with a very fine emery cloth, carefully used. Use emery cloth on flat surface of blade, not on points.

When necessary, after prolonged use, the complete ionizer and collector plate sections may require a good manual cleaning with warm water and a non-foaming, non-corrosive detergent. Care should be taken in handling throughout the operation. High pressure commercial spray devices (such as a car wash) usually do a good job.

Periodically, the surfaces of the components within the power pack should be wiped clean and the securement of connections checked. Access to the power supply is gained by removing the primary power cable and power pack cover.

## V. TROUBLESHOOTING

**NOTE: EXERCISE THE NORMAL PRECAUTIONS WHEN WORKING WITH HIGH VOLTAGE.**

**A. PILOT LIGHT (LED) DIM:**
1. Check to see that primary power is supplied to power supply and that LED is good.
2. If power is supplied to the power supply, and the pilot light is dim, it is an indication that there is a short circuit, either in the power supply or the ionizing-collecting elements. It can be isolated to one or the other by energizing the power supply with the ionizer and collector elements removed from the cabinet. If the light glows bright with the elements removed from the cabinet, the short is then in the ionizer or the collector sections. It can be further isolated to one or the other by energizing one at a time with the other removed.
   - Power Supply Shorts: Pilot light dim or out with ionizing-collecting elements removed. Replace power supply.
   - Ionizer Shorts:
     - Bent or deformed ionizer blades. Remove and replace.
     - Dirty insulators. Clean.
     - Foreign objects between charged and ground potentials. Remove.
   - Collector Shorts:
     - Foreign object between plates. Remove.
     - Bent or deformed plates. Straighten.
     - Dirty insulators. Clean.

**B. EXCESSIVE ARCING:**
1. Loose or damaged ionizing blade. Replace.
2. Large particle of foreign material lodged between the collector plates. Remove.
3. Bent collector plates. Straighten.
4. Loose high voltage connection or deformed high voltage contact spring. Correct or replace as necessary.
5. Ionizer and/or collector excessively dirty. Refer to IV. Maintenance.

**C. LOW OR REDUCED EFFICIENCY:**
1. Dirty ionizing blades and/or collector components. Refer to cleaning instructions under IV. Maintenance.
2. Increase in gas flow above the unit rating. Reduce flow.

3. Increase in particulate concentration above unit rating. Reduce concentrations.
4. Low secondary voltage. The ionizer voltage should be -13 KVDC +/- 500 VDC. The collector voltage should be -6.5 KVDC +/- 500 VDC. The ionizer current should be between 0.5 and 1.5 mA.
5. Loose or faulty high voltage connection between power supply and ionizer-collector elements. Check secondary wiring from power supply to high voltage contact springs. Check high voltage contacts to be sure they are contacting both ionizer and collector.

## VI. RECOMMENDED SPARE PARTS

| ITEM | DESCRIPTION | PART NO. | QTY SUGGESTED |
|---|---|---|---|
| A | All 120 VAC Input Power Supply | 267232-120 | 1 |
| | All 240 VAC Input Power Supply | 267232-240 | |
| B | LED Assembly | 241101-020 | 1 |
| C | Spring Contact | 221952-001 | 1 |

## VII. OUTLINE DRAWINGS

**OUTLINE DRAWINGS (SUBSEQUENT PAGES)**

The “weatherproof power pack” and “weatherproof junction box” are designed to offer protection to IP-54. The junction box for 220-240 VAC models is furnished with a terminal block for connection of field installed supply power wiring. The terminal block is earthed to the junction box through the earth terminal (PE) and includes a 1.2 Amp fuse for the line connection (L). A third unfused terminal is included for the neutral (N) supply wire. A strain relief connector for connecting a supply cable to the junction box, suitable for cable diameters of 4.8 to 7.9 mm, is furnished. It is packaged with the junction box.

**150 CFM PARTS**

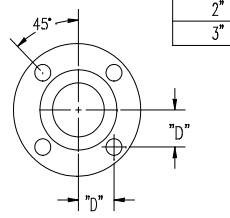
| TRION Part Number | Weight (lbs.) | Inlet Connector | Outlet Connector | Part Number Flame Arrestor | Power Supply 120 VAC | Power Supply 240 VAC |
|---|---|---|---|---|---|---|
| 439057-001<br>-029 | 141 | 2” Flange | – | 322792-001 | 1<br>0 | 0<br>1 |
| -002<br>-030 | 145 | 3” Flange | – | 322792-002 | 1<br>0 | 0<br>1 |
| -003<br>-031 | 150 | 4” Flange | – | 322791-002 | 1<br>0 | 0<br>1 |
| -008<br>-036 | 147 | 2” Flange | 2” Flange | 322792-001 | 1<br>0 | 0<br>1 |
| -009<br>-037 | 155 | 3” Flange | 3” Flange | 322792-002 | 1<br>0 | 0<br>1 |
| -010<br>-038 | 165 | 4” Flange | 4” Flange | 322791-002 | 1<br>0 | 0<br>1 |
| -015<br>-043 | 138 | 2” Pipe | – | 322792-001 | 1<br>0 | 0<br>1 |
| -016<br>-044 | 141 | 3” Pipe | – | 322792-002 | 1<br>0 | 0<br>1 |
| -017<br>-045 | 143 | 4” Pipe | – | 322791-002 | 1<br>0 | 0<br>1 |
| -022<br>-050 | 141 | 2” Pipe | 2” Pipe | 322792-001 | 1<br>0 | 0<br>1 |
| -023<br>-051 | 147 | 3” Pipe | 3” Pipe | 322792-002 | 1<br>0 | 0<br>1 |
| -024<br>-052 | 151 | 4” Pipe | 4” Pipe | 322791-002 | 1<br>0 | 0<br>1 |
| -061<br>-062 | 159 | 6” Flange | – | 322791-001 | 1<br>0 | 0<br>1 |
| -060<br>-059 | 183 | 6” Flange | 6” Flange | 322791-001 | 1<br>0 | 0<br>1 |

**NOTES:**

1. The part number for the Ionizer Cell for all units on this page is 422728-011. Only one required.
2. The part number for the Collector Cell for all units on this page is 422729-003. Only one required.
3. Flame arrestor not supplied but required in pipe inlet applications.

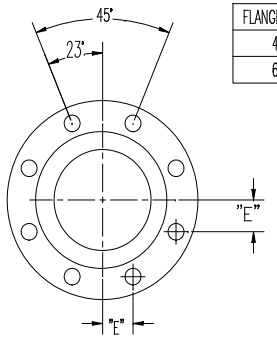
# 150 CFM - Outline Drawing with Inlet Flange or Pipe (424396)

| TRION P.N. | WEIGHT (LBS.) | INLET CONNECTOR | OUTLET CONNECTOR | FLAME ARRESTOR P.N. | POWER REQUIREMENTS | DIM. "A" | DIM. "B" |
|---|---|---|---|---|---|---|---|
| 439057-001 | 141 | 2" FLANGE | --- | 322792-001 | 120 V 60 HZ | 3.75 | 10.25 |
| -029 | 141 | 2" FLANGE | --- | 322792-001 | 240 V 50 HZ | 3.75 | 10.25 |
| -015 | 138 | 2" PIPE | --- | 322792-001 | 120 V 60 HZ | --- | 10.25 |
| -043 | 138 | 2" PIPE | --- | 322792-001 | 240 V 50 HZ | --- | 10.25 |
| -002 | 145 | 3" FLANGE | --- | 322792-002 | 120 V 60 HZ | 3.56 | 10.25 |
| -030 | 145 | 3" FLANGE | --- | 322792-002 | 240 V 50 HZ | 3.56 | 10.25 |
| -016 | 141 | 3" PIPE | --- | 322792-002 | 120 V 60 HZ | --- | 10.25 |
| -044 | 141 | 3" PIPE | --- | 322792-002 | 240 V 50 HZ | --- | 10.25 |
| -003 | 150 | 4" FLANGE | --- | 322791-002 | 120 V 60 HZ | 3.56 | 10.25 |
| -031 | 150 | 4" FLANGE | --- | 322791-002 | 240 V 50 HZ | 3.56 | 10.25 |
| -017 | 143 | 4" PIPE | --- | 322791-002 | 120 V 60 HZ | --- | 10.25 |
| -045 | 143 | 4" PIPE | --- | 322791-002 | 240 V 50 HZ | --- | 10.25 |
| -061 | 159 | 6" FLANGE | --- | 322791-001 | 120 V 60 HZ | 3.50 | 9.81 |
| -062 | 159 | 6" FLANGE | --- | 322791-001 | 240 V 50 HZ | 3.50 | 9.81 |




2" & 3" FLANGE HOLE POSITION

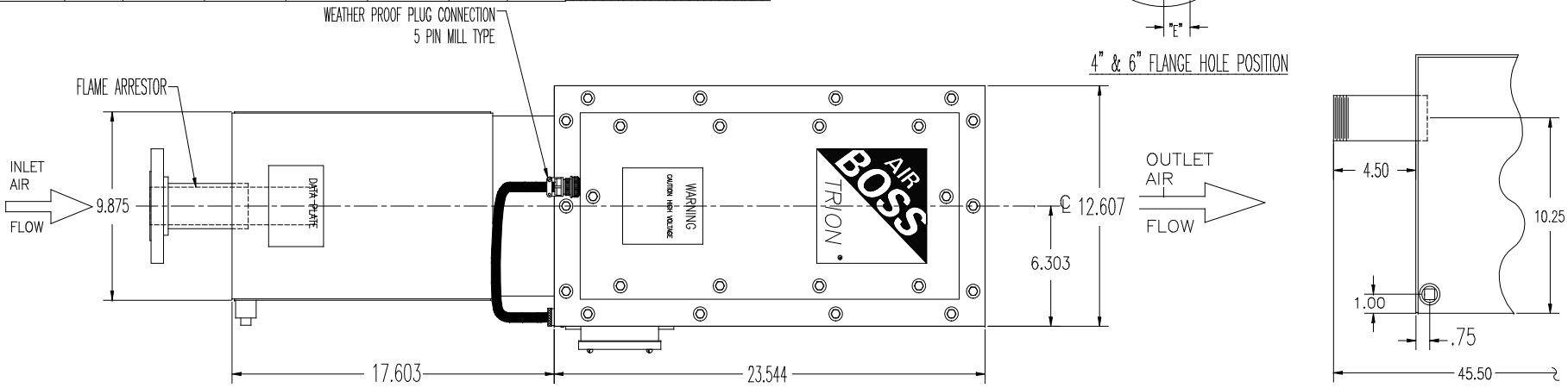
| FLANGE SIZE | BOLT CIRCLE DIA. | "D" | HOLE DIA. |
|---|---|---|---|
| 2" | 4.750 | 1.679 | .750 |
| 3" | 6.000 | 2.121 | .750 |



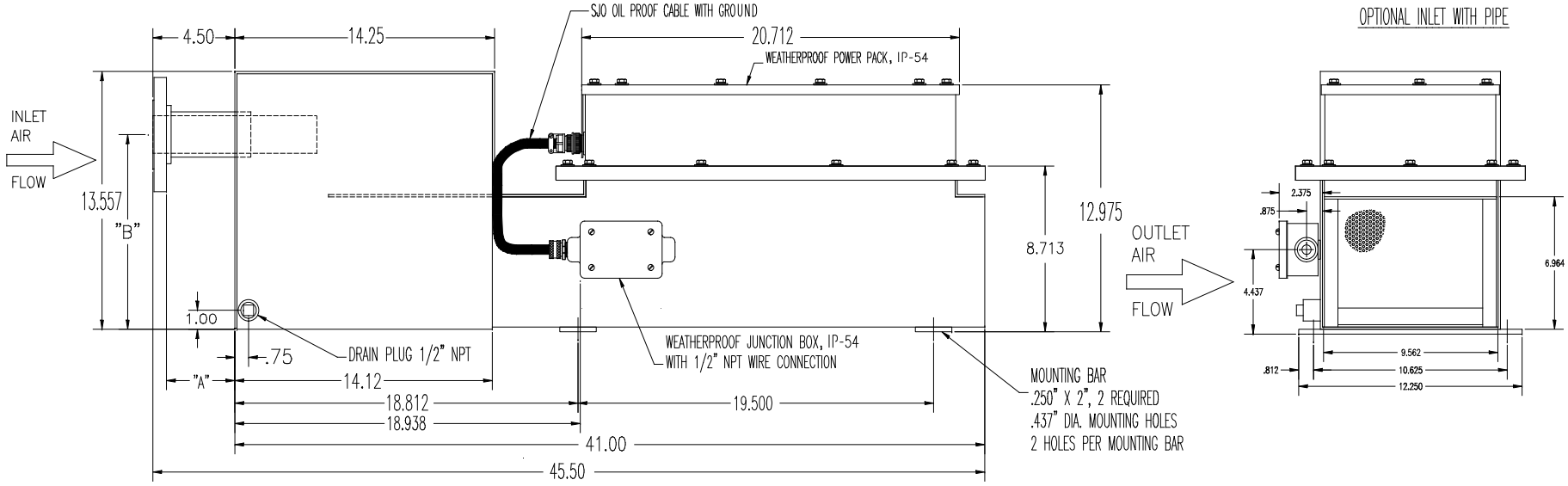

4" & 6" FLANGE HOLE POSITION

| FLANGE SIZE | BOLT CIRCLE DIA. | "E" | HOLE DIA. |
|---|---|---|---|
| 4" | 7.500 | 1.435 | .750 |
| 6" | 9.500 | 1.817 | .875 |

NOTES:
1. DUCT OR RAIN SHIELD MAY BE CONNECTED TO OUTLET.
2. MOUNT FOR VERTICAL UP AIR FLOW.
3. FLANGES 150# RAISED FACE.

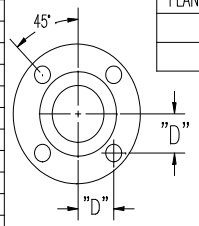



OPTIONAL INLET WITH PIPE



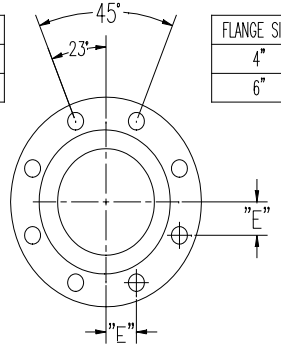
# 150 CFM - Outline Drawing with Inlet & Outlet Flange or Pipe (424397)

| TRION P.N. | WEIGHT (LBS.) | INLET CONNECTOR | OUTLET CONNECTOR | FLAME ARRESTOR P.N. | POWER REQUIREMENTS | DIM. "A" | DIM. "B" | DIM. "C" |
|---|---|---|---|---|---|---|---|---|
| 439057-008 | 147 | 2" FLANGE | 2" FLANGE | 322792-001 | 120 V 60 HZ | 3.75 | 10.25 | --- |
| -036 | 147 | 2" FLANGE | 2" FLANGE | 322792-001 | 240 V 50 HZ | 3.75 | 10.25 | --- |
| -022 | 141 | 2" PIPE | 2" PIPE | 322792-001 | 120 V 60 HZ | --- | 10.25 | --- |
| -050 | 141 | 2" PIPE | 2" PIPE | 322792-001 | 240 V 50 HZ | --- | 10.25 | --- |
| -009 | 155 | 3" FLANGE | 3" FLANGE | 322792-002 | 120 V 60 HZ | 3.56 | 10.25 | .03 |
| -037 | 155 | 3" FLANGE | 3" FLANGE | 322792-002 | 240 V 50 HZ | 3.56 | 10.25 | .03 |
| -023 | 147 | 3" PIPE | 3" PIPE | 322792-002 | 120 V 60 HZ | --- | 10.25 | --- |
| -051 | 147 | 3" PIPE | 3" PIPE | 322792-002 | 240 V 50 HZ | --- | 10.25 | --- |
| -010 | 165 | 4" FLANGE | 4" FLANGE | 322791-002 | 120 V 60 HZ | 3.56 | 10.25 | .78 |
| -038 | 165 | 4" FLANGE | 4" FLANGE | 322791-002 | 240 V 50 HZ | 3.56 | 10.25 | .78 |
| -024 | 151 | 4" PIPE | 4" PIPE | 322791-002 | 120 V 60 HZ | --- | 10.25 | --- |
| -052 | 151 | 4" PIPE | 4" PIPE | 322791-002 | 240 V 50 HZ | --- | 10.25 | --- |
| -060 | 183 | 6" FLANGE | 6" FLANGE | 322791-001 | 120 V 60 HZ | 3.50 | 9.81 | 1.78 |
| -059 | 183 | 6" FLANGE | 6" FLANGE | 322791-001 | 240 V 50 HZ | 3.50 | 9.81 | 1.78 |




2" & 3" FLANGE HOLE POSITION

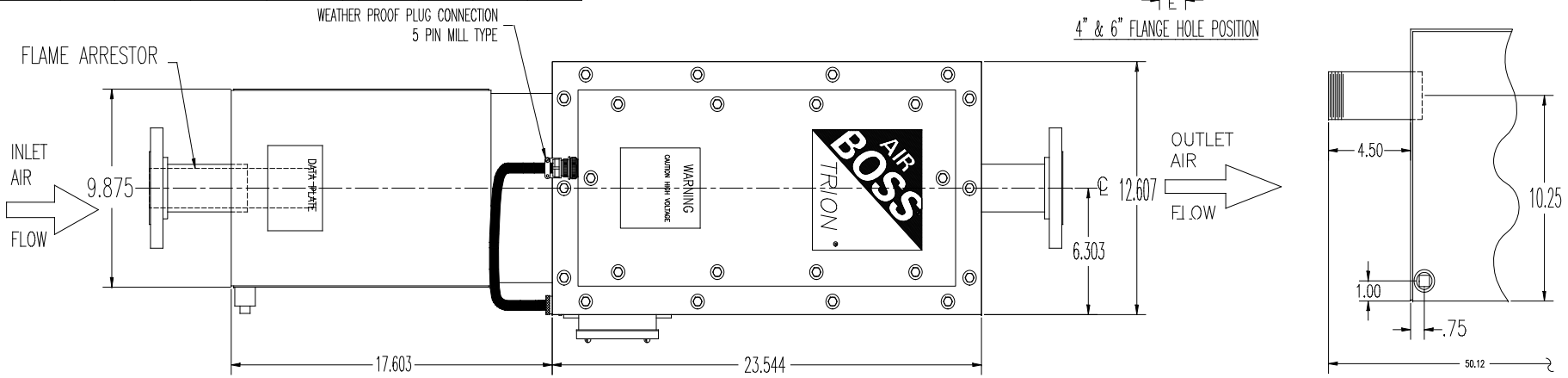
| FLANGE SIZE | BOLT CIRCLE DIA. | "D" | HOLE DIA. |
|---|---|---|---|
| 2" | 4.750 | 1.679 | .750 |
| 3" | 6.000 | 2.121 | .750 |




4" & 6" FLANGE HOLE POSITION

| FLANGE SIZE | BOLT CIRCLE DIA. | "E" | HOLE DIA. |
|---|---|---|---|
| 4" | 7.500 | 1.435 | .750 |
| 6" | 9.500 | 1.817 | .875 |

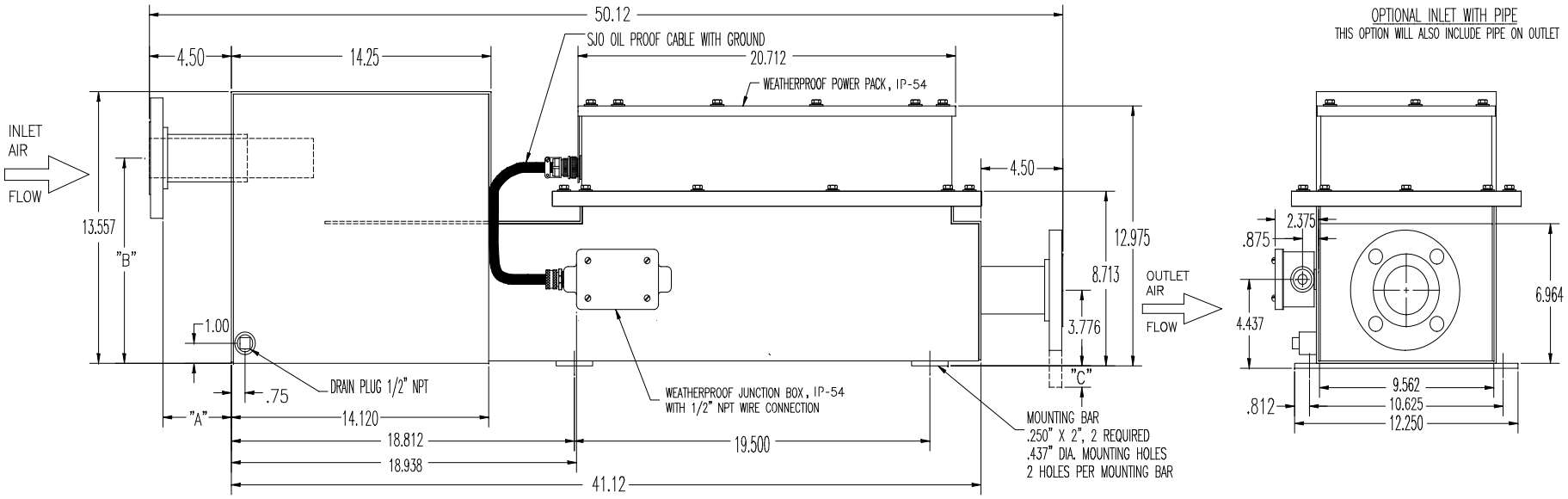
NOTES:
1. DUCT OR RAIN SHIELD MAY BE CONNECTED TO OUTLET.
2. MOUNT FOR VERTICAL UP AIR FLOW.
3. FLANGES 150# RAISED FACE.







OPTIONAL INLET WITH PIPE
THIS OPTION WILL ALSO INCLUDE PIPE ON OUTLET



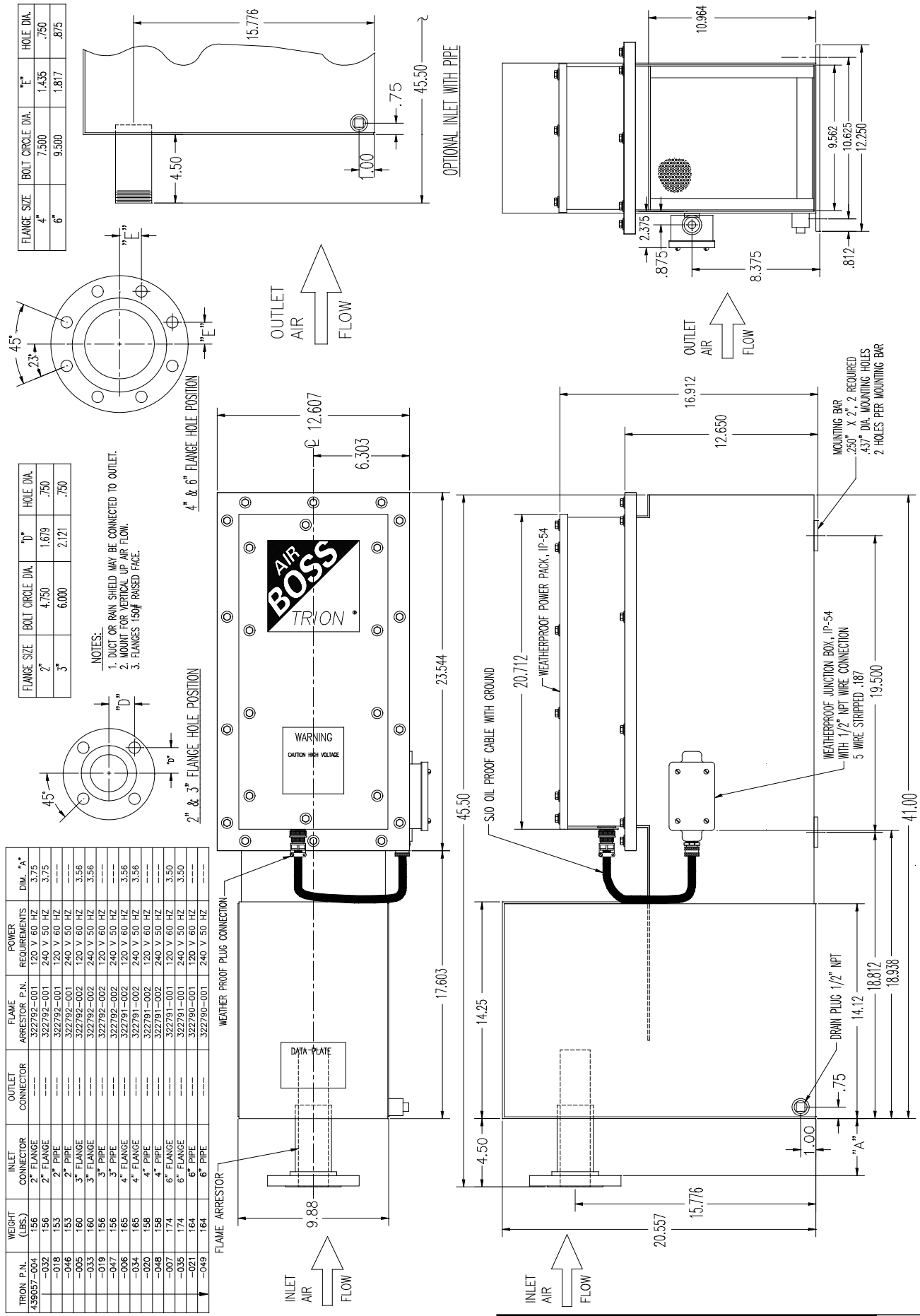
**300 CFM PARTS**

| TRION Part Number | Weight (lbs.) | Inlet Connector | Outlet Connector | Part Number Flame Arrestor | Power Supply 120 VAC | Power Supply 240 VAC |
|---|---|---|---|---|---|---|
| 439057-004<br>-032 | 156 | 2” Flange | – | 322792-001 | 1<br>0 | 0<br>1 |
| -005<br>-033 | 160 | 3” Flange | – | 322792-002 | 1<br>0 | 0<br>1 |
| -006<br>-034 | 165 | 4” Flange | – | 322791-002 | 1<br>0 | 0<br>1 |
| -007<br>-035 | 174 | 6” Flange | – | 322791-001 | 1<br>0 | 0<br>1 |
| -011<br>-039 | 162 | 2” Flange | 2” Flange | 322792-001 | 1<br>0 | 0<br>1 |
| -012<br>-040 | 170 | 3” Flange | 3” Flange | 322792-002 | 1<br>0 | 0<br>1 |
| -013<br>-041 | 180 | 4” Flange | 4” Flange | 322791-002 | 1<br>0 | 0<br>1 |
| -014<br>-042 | 198 | 6” Flange | 6” Flange | 322791-001 | 1<br>0 | 0<br>1 |
| -018<br>-046 | 153 | 2” Pipe | – | 322792-001 | 1<br>0 | 0<br>1 |
| -019<br>-047 | 156 | 3” Pipe | – | 322792-002 | 1<br>0 | 0<br>1 |
| -020<br>-048 | 158 | 4” Pipe | – | 322791-002 | 1<br>0 | 0<br>1 |
| -021<br>-049 | 164 | 6” Pipe | – | 322790-001 | 1<br>0 | 0<br>1 |
| -025<br>-053 | 156 | 2” Pipe | 2” Pipe | 322792-001 | 1<br>0 | 0<br>1 |
| -026<br>-054 | 162 | 3” Pipe | 3” Pipe | 322792-002 | 1<br>0 | 0<br>1 |
| -027<br>-055 | 168 | 4” Pipe | 4” Pipe | 322791-002 | 1<br>0 | 0<br>1 |
| -028<br>-056 | 178 | 6” Pipe | 6” Pipe | 322791-001 | 1<br>0 | 0<br>1 |
| -057 | 179 | 4” Flange | 6” Flange | 322791-001 | 1 | 0 |
| -065* | 162 | 3” Pipe | 3” Pipe | 322792-002 | 1 | 0 |

**NOTE:**
1. The part number for the Ionizer Cell for all units on this page is 422728-012. Only one required.
2. The part number for the Collector Cell for all units on this page is 422729-002. Only one required.
3. Flame arrestor not supplied but required on pipe inlet applications.

* Stainless Steel Ionizer & Collector Cell
  - Ionizer Part No. 431318-001
  - Collector Cell Part No. 431319-001

## 300 CFM - Outline Drawing with Inlet Flange or Pipe (424399)




| FLANGE SIZE | BOLT CIRCLE DIA. | "D" | HOLE DIA. |
|---|---|---|---|
| 2" | 4.750 | 1.679 | .750 |
| 3" | 6.000 | 2.121 | .750 |

| FLANGE SIZE | BOLT CIRCLE DIA. | "E" | HOLE DIA. |
|---|---|---|---|
| 4" | 7.500 | 1.435 | .750 |
| 6" | 9.500 | 1.817 | .875 |

| TRION P.N. | WEIGHT (LBS.) | INLET CONNECTOR | OUTLET CONNECTOR | FLAME ARRESTOR P.N. | POWER REQUIREMENTS | DIM. "A" |
|---|---|---|---|---|---|---|
| 439057-004 | 156 | 2" FLANGE | --- | 322792-001 | 120 V 60 HZ | 3.75 |
| -032 | 156 | 2" FLANGE | --- | 322792-001 | 240 V 50 HZ | 3.75 |
| -018 | 153 | 2" PIPE | --- | 322792-001 | 120 V 60 HZ | --- |
| -046 | 153 | 2" PIPE | --- | 322792-001 | 240 V 50 HZ | --- |
| -005 | 160 | 3" FLANGE | --- | 322792-002 | 120 V 60 HZ | 3.56 |
| -033 | 160 | 3" FLANGE | --- | 322792-002 | 240 V 50 HZ | 3.56 |
| -019 | 156 | 3" PIPE | --- | 322792-002 | 120 V 60 HZ | --- |
| -047 | 156 | 3" PIPE | --- | 322792-002 | 240 V 50 HZ | --- |
| -006 | 165 | 4" FLANGE | --- | 322791-002 | 120 V 60 HZ | 3.56 |
| -034 | 165 | 4" FLANGE | --- | 322791-002 | 240 V 50 HZ | 3.56 |
| -020 | 158 | 4" PIPE | --- | 322791-002 | 120 V 60 HZ | --- |
| -048 | 158 | 4" PIPE | --- | 322791-002 | 240 V 50 HZ | --- |
| -007 | 174 | 6" FLANGE | --- | 322791-001 | 120 V 60 HZ | 3.50 |
| -035 | 174 | 6" FLANGE | --- | 322791-001 | 240 V 50 HZ | 3.50 |
| -021 | 164 | 6" PIPE | --- | 322790-001 | 120 V 60 HZ | --- |
| -049 | 164 | 6" PIPE | --- | 322790-001 | 240 V 50 HZ | --- |

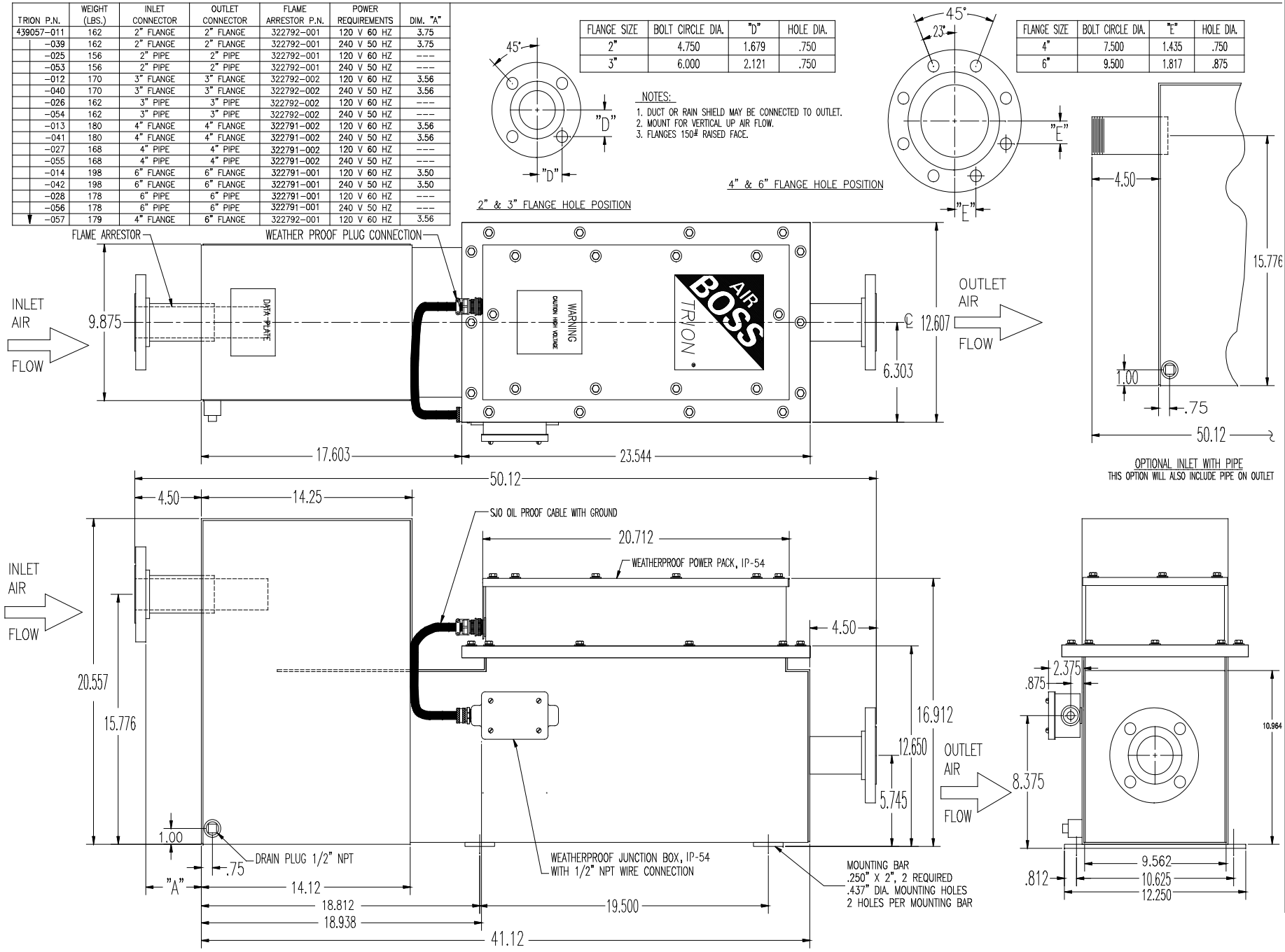
# 300 CFM - Outline Drawing with Inlet & Outlet Flange or Pipe (424398)

| TRION P.N. | WEIGHT (LBS.) | INLET CONNECTOR | OUTLET CONNECTOR | FLAME ARRESTOR P.N. | POWER REQUIREMENTS | DIM. "A" |
|---|---|---|---|---|---|---|
| 439057-011 | 162 | 2" FLANGE | 2" FLANGE | 322792-001 | 120 V 60 HZ | 3.75 |
| -039 | 162 | 2" FLANGE | 2" FLANGE | 322792-001 | 240 V 50 HZ | 3.75 |
| -025 | 156 | 2" PIPE | 2" PIPE | 322792-001 | 120 V 60 HZ | --- |
| -053 | 156 | 2" PIPE | 2" PIPE | 322792-001 | 240 V 50 HZ | --- |
| -012 | 170 | 3" FLANGE | 3" FLANGE | 322792-002 | 120 V 60 HZ | 3.56 |
| -040 | 170 | 3" FLANGE | 3" FLANGE | 322792-002 | 240 V 50 HZ | 3.56 |
| -026 | 162 | 3" PIPE | 3" PIPE | 322792-002 | 120 V 60 HZ | --- |
| -054 | 162 | 3" PIPE | 3" PIPE | 322792-002 | 240 V 50 HZ | --- |
| -013 | 180 | 4" FLANGE | 4" FLANGE | 322791-002 | 120 V 60 HZ | 3.56 |
| -041 | 180 | 4" FLANGE | 4" FLANGE | 322791-002 | 240 V 50 HZ | 3.56 |
| -027 | 168 | 4" PIPE | 4" PIPE | 322791-002 | 120 V 60 HZ | --- |
| -055 | 168 | 4" PIPE | 4" PIPE | 322791-002 | 240 V 50 HZ | --- |
| -014 | 198 | 6" FLANGE | 6" FLANGE | 322791-001 | 120 V 60 HZ | 3.50 |
| -042 | 198 | 6" FLANGE | 6" FLANGE | 322791-001 | 240 V 50 HZ | 3.50 |
| -028 | 178 | 6" PIPE | 6" PIPE | 322791-001 | 120 V 60 HZ | --- |
| -056 | 178 | 6" PIPE | 6" PIPE | 322791-001 | 240 V 50 HZ | --- |
| -057 | 179 | 4" FLANGE | 6" FLANGE | 322792-001 | 120 V 60 HZ | 3.56 |

| FLANGE SIZE | BOLT CIRCLE DIA. | "D" | HOLE DIA. |
|---|---|---|---|
| 2" | 4.750 | 1.679 | .750 |
| 3" | 6.000 | 2.121 | .750 |

NOTES:
1. DUCT OR RAIN SHIELD MAY BE CONNECTED TO OUTLET.
2. MOUNT FOR VERTICAL UP AIR FLOW.
3. FLANGES 150# RAISED FACE.

| FLANGE SIZE | BOLT CIRCLE DIA. | "E" | HOLE DIA. |
|---|---|---|---|
| 4" | 7.500 | 1.435 | .750 |
| 6" | 9.500 | 1.817 | .875 |



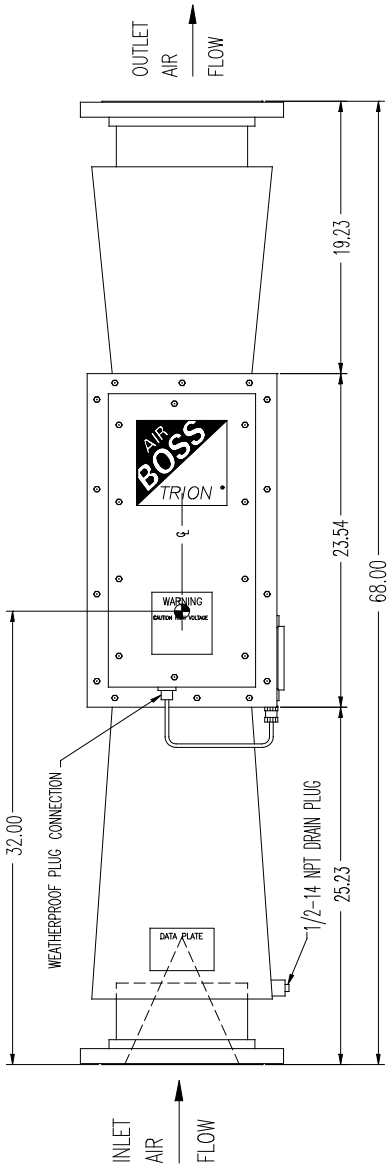
## 600 CFM PARTS

| TRION Part Number | Weight (lbs.) | Inlet Connector | Outlet Connector | Part Number Flame Arrestor | Power Supply 120 VAC | Power Supply 240 VAC |
|---|---|---|---|---|---|---|
| 439057-063 | 355 | 8” Flange | 8” Flange | 322791-003 | 1 | 0 |
| 439057-064 | 355 | 8” Flange | 8” Flange | 322791-003 | 0 | 1 |

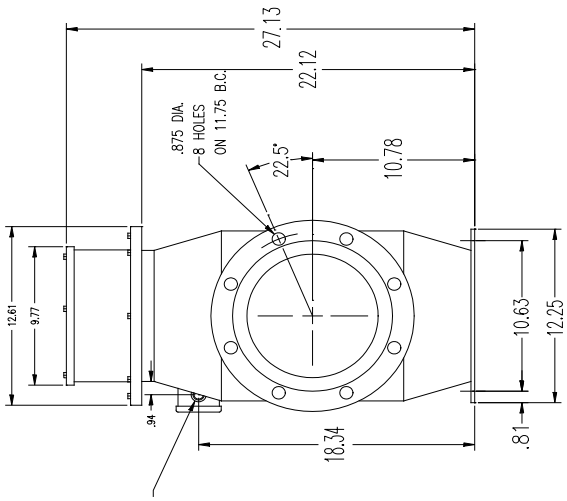
**NOTE:**
1. The part number for the Ionizer Cell for all units on this page is 422728-013. Two are required.
2. The part number for the Collector Cell for all units on this page is 422729-005. Two are required.

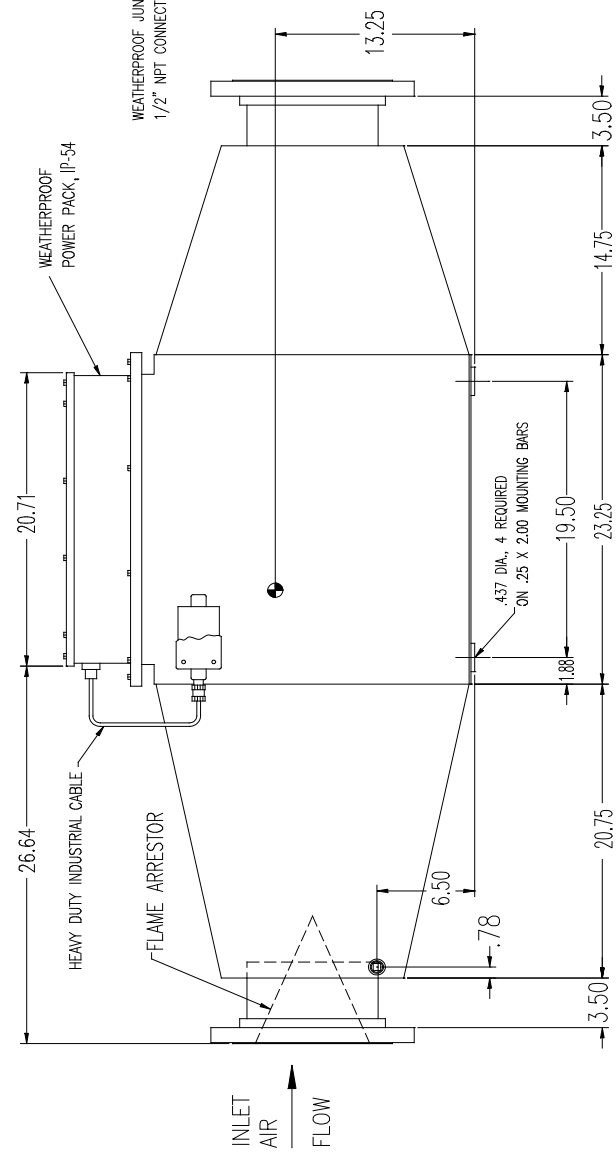
## 600 CFM - Outline Drawing (429436)

| TRION PART NO. | WEIGHT (LBS.) | INLET CONNECTOR | OUTLET CONNECTOR | FLAME ARRESTOR PART NO. | POWER REQUIREMENTS |
|---|---|---|---|---|---|
| 439057-063 | 355 | 8" FLANGE | 8" FLANGE | 322791-003 | 120 VOLT 60 HZ |
| 439057-064 | 355 | 8" FLANGE | 8" FLANGE | 322791-003 | 240 VOLT 50 HZ |



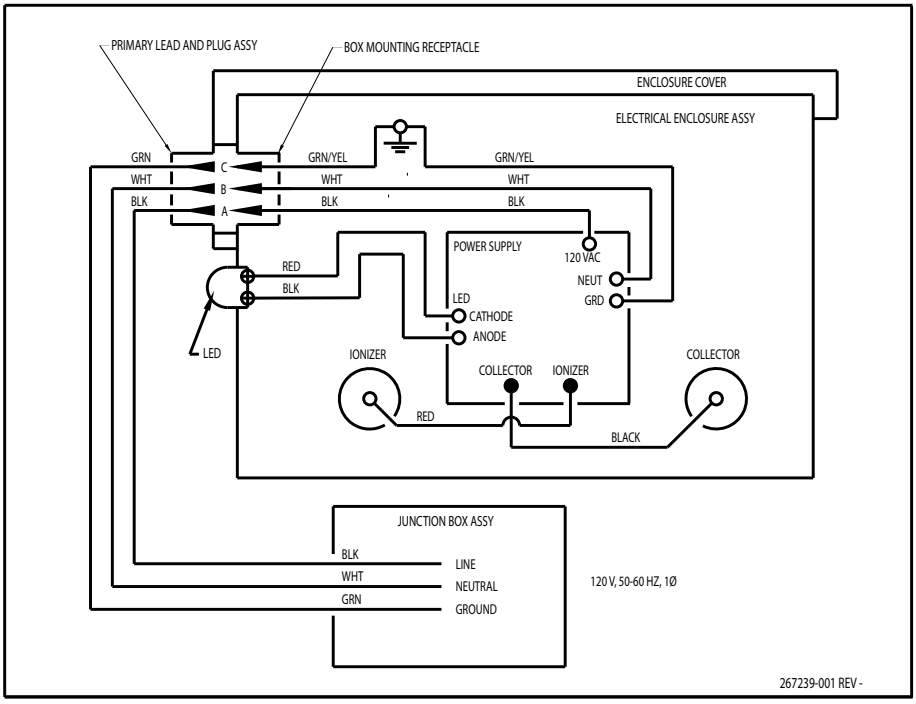

NOTES:
1. MOUNT FOR VERTICAL UP AIR FLOW.
2. INLET AND OUTLET FLANGES ARE 150 LBS. RAISED FACE.
3. DUCT OR RAIN SHIELD MAY BE CONNECTED TO OUTLET.



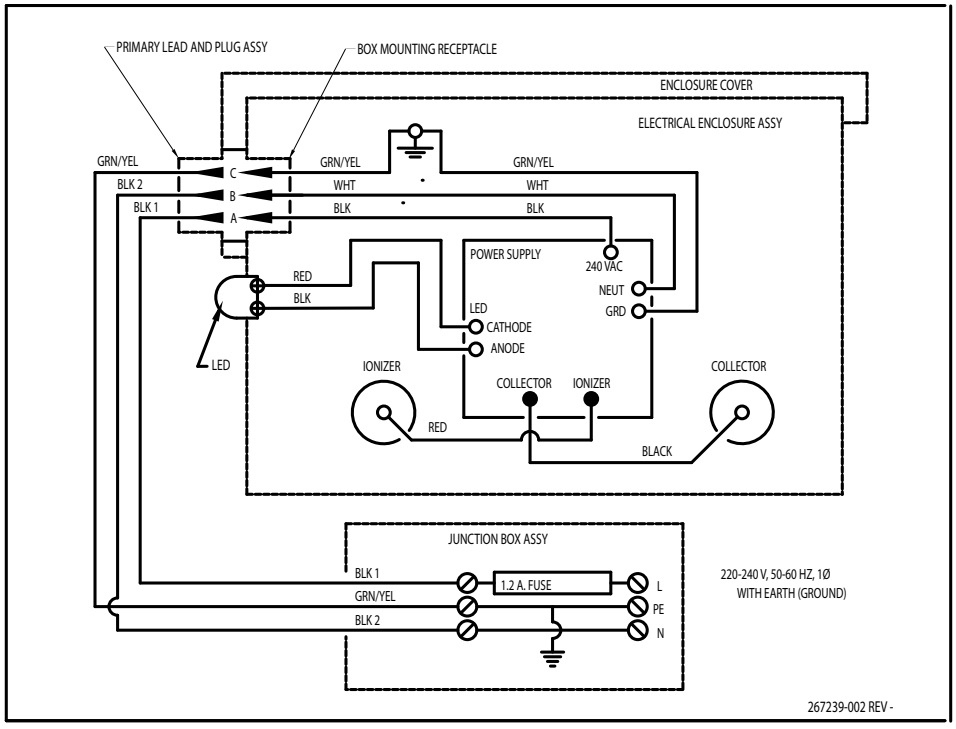



## VIII. ELECTRICAL SCHEMATIC

**120V**



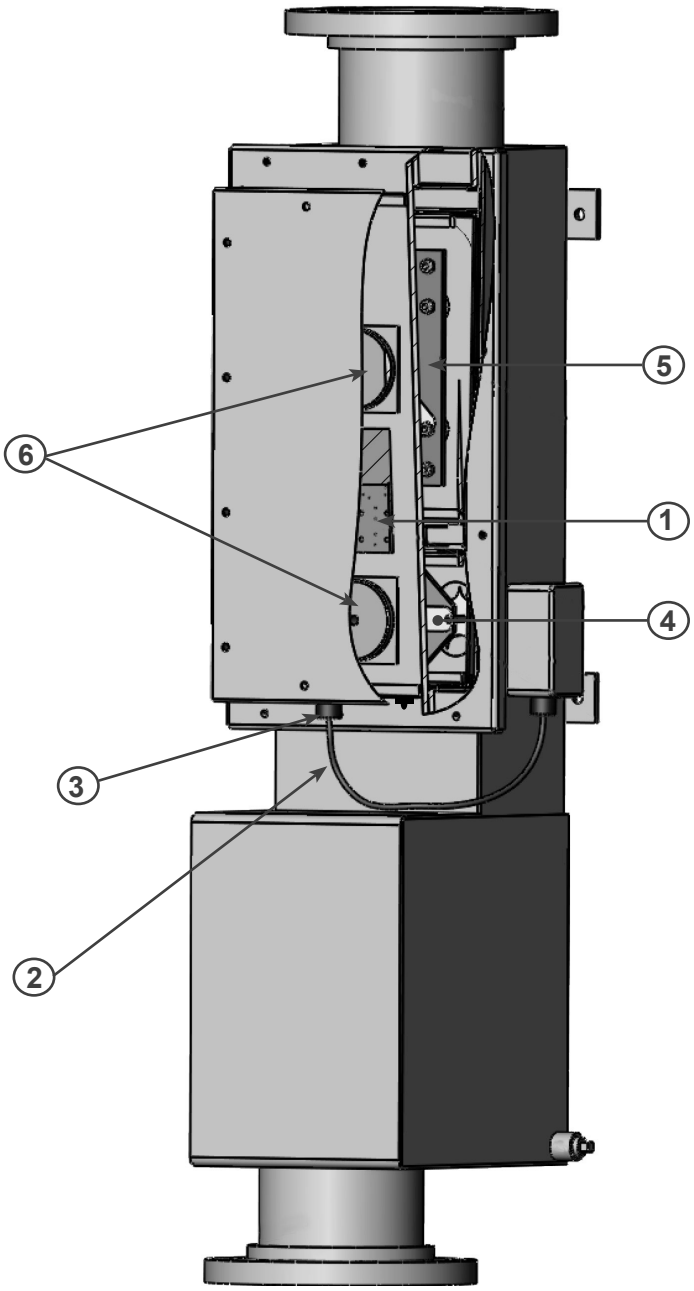

**220-240V**



## IV. ELECTRICAL PARTS LIST

| 150 CFM QTY | 300 CFM QTY | 600 CFM QTY | Item | TRION Part No. | Description |
|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 267232-120 | Power Supply - 120 VAC Input Voltage |
| | | | | 267232-240 | Power Supply - 240 VAC Input Voltage |
| 1 | 1 | - | 2 | 268678-001 | Primary Plug and Receptacle Assembly 120 VAC Input Voltage - 150 and 300 CFM |
| | | | | 268678-003 | Primary Plug and Receptacle Assembly 240 VAC Input Voltage - 150 and 300 CFM |
| - | - | 1 | | 268678-002 | Primary Plug and Receptacle Assembly 120 VAC Input Voltage - 600 CFM |
| | | | | 268678-004 | Primary Plug and Receptacle Assembly 240 VAC Input Voltage - 600 CFM |
| 1 | 1 | 1 | 3 | 241101-020 | LED Assembly |
| 1 | - | - | 4 | 422728-011 | Ionizer Cell |
| - | 1 | - | | 422728-012 | |
| - | - | 2 | | 422728-013 | |
| 1 | - | - | 5 | 422729-003 | Collector Cell |
| - | 1 | - | | 422729-002 | |
| - | - | 2 | | 422729-005 | |
| 4 | 4 | 4 | 6 | 122732-002 | Insulator (HV Contact) |
| 2 | 2 | 2 | * | 221952-001 | HV Contact |
| 2 | 4 | 8 | * | 242037-002 | Spiked Ionizer Blade |
| 2 | 2 | 4 | * | 220081-001 | Insulator, Ionizer Cell |
| 2 | 2 | 4 | * | 220146-001 | Insulator, Collector Cell |

## V. DIAGRAM



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Indoor Air Quality

TRION®

101 McNeill Rd. | Sanford, NC 27330

P: 800.884.0002 | F: 800.458.2379 | www.trioniaq.com | customerservice@trioniaq.com

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