# **Air Boss DC Series** Cartridge Dust Collectors INSTALLATION **OPERATION** SERVICE **Dust Collectors for Industrial Applications** air purification systems

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#### PRECAUTIONARY STATEMENTS

# 1. APPLICATION OF TRION CARTRIDGE DUST COLLECTORS

1. Due to potential fire hazards, do not mix combustible materials with material that would be a potential source of ignition.

#### **Examples of Combustible Materials:**

Wood Dust Paper Dust Lint from fabric or buffing wheels Grinding dust from painted surfaces Aluminum or magnesium dusts

#### **Examples of Potential Ignition Sources**

Grinding dust from ferrous metals Hot ash or sparks from any source

- 2. Unless the equipment was originally designed for collection of explosive material and proper disclaimer on record, this equipment must not be used for the collection of any materials where there is a risk of explosion. Pressure relief vents or explosion vents must not be applied to the equipment or adjoining systems.
- 3. Equipment location, installation and operation must comply with all National and Local Fire Codes. When in doubt, contact proper authorities.
- 4. The electrical installation must conform to all local codes and the National Electric Code.
- 5. Workers and operators are to be instructed to keep burning objects, such as eigarettes, safely away from inlets leading to the equipment.
- 6. All personnel involved with the use of this equipment must comply with the statements pertaining to worker safety as noted in this manual.

TRION cartridge dust collectors are designed to filter out solid particulate and dusts such as weld fume and grinding dust. The cleaned air is then returned to the work space to eliminate the need to exhaust treated air. The collector can be suspended from the roof structure, supported from legs or placed directly on the floor. A dust drawer is available for floor mounted installations. With suspended or leg supported installations, a hopper is available for dust removal.

Once the unit is mounted and ductwork installed, the connection of electrical power and compressed air complete the installation.

#### a. HOOD & DUCT DESIGN

The hood and duct design is critical to assure an effective dust/fume collection system. A text such as "Industrial Ventilation" A Manual of Recommended Practice, (25th Edition is current at time of this writing) is available from The American Conference of Governmental Industrial Hygienists. This text is an excellent guide for hood and duct design. Should additional assistance be required, contact your TRION distributor.

#### b. EXPLANATION OF OPERATION

During normal operation, contaminated air is pulled into the top section of the cartridge collector cabinet. The cabinet design distributes the contaminated air uniformly above the vertically arranged filter cartridges. This air moves downward, with a true laminar air flow, between the cartridge filters and towards the settling area, just below the cartridge filters. Once in the settling area, unlike conventional collectors, air flow is non-existent. Therefore, gravity is the only influence on the dust and the dust can move into the hopper or dust drawer as required.

A portion of the dust will collect on the surface of the cartridge media as the dust-free air passes through the media, through the vertical venturi, into the horizontal clean air duct and to the blower for return to the work space.

The dust that collects on the cartridge media will be repelled into the downward air flow by the reverse jet pulse cleaning system. This is controlled by a solid state timer. At prescribed times, a brief burst of compressed air will be released to a row of cartridge filters, fired upwards through the vertical venturi, into the core of the cartridge filter to impact the dust away from the filters surface. The dust is caught by the downward flow and once again moved towards the settling chamber.

The hopper or dust drawer of the TRION Collectors contains no airflow inlets or outlets. In fact, airflow is never close to the hopper or dust drawer. This eliminates the possibility of reentraiment of the dust once it gets into these sections of the dust collector cabinets.

#### c. INITIAL INSTALLATION CONSIDERATIONS

The location of the unit(s) must be planned to maximize effective operation, service and maintenance. Should questions arise or if assistance is needed, consult your TRION distributor.

After the installation, clearance must be available to service the following components:

- 1. Filters
- 2. Fan
- 3. Valves
- 4. Controls

5. Dust storage devise such as dust drawer or dust drum.

Structural supports and hangers must be capable of supporting the load of the dust collector, plus options, and the heaviest load of dust the collector can contain.

#### d. INSPECTION

Upon receipt, the collector and the optional components must be checked for damage or loss incurred during shipping. Damage must be noted on the bill of lading and a claim be filed with the carrier immediately.

#### 2. INSTALLATION

#### a. General

Prior to mounting the unit, it may be advantageous to remove the cartridge filters to reduce the weight of the collector. Store filters in a safe location.

Should the installation require a hopper or dust drawer to be installed on the collector, the joining flanges must be sealed to eliminate air leaks. Use silicone or an equivalent high quality sealant.

NOTE: Leaks at the flanges of the hopper or dust drawer will cause excessive dust reintrainment. Be certain no air leaks exist.

Should the unit include a Leg/Hopper assembly, position it in the planned installation location. Assemble the leg kit to the hopper as illustrated on the drawing, page 10 of manual. Anchor the Leg/Hopper assembly to the concrete floor using 3/4" tapered anchor bolts, 1 per anchor pad for a total of 4 each, tapered anchor bolts.

Use silicone or equivalent high quality sealant on the flanges and place the collector on the Leg/Hopper assembly. Using the supplied bolts, nuts and washers secure the collector to the Leg/Hopper assembly. A drift pin or alignment tool will aid in hole alignment.

Should the collector include a Cradle/Hopper assembly for suspension from overhead, locate and attach the Cradle/Hopper assembly to adequate overhead structure. Be certain the overhead structure and suspension method is capable of easily handling the total weight of the collector, all attached components/options and the maximum added weight due to dust load.

Note: Should questions arise concerning total weight, consult your TRION Distributor or the TRION Factory.

Should the collector include a factory installed dust drawer, position the collector in the planned location and secure it in place using 3/4" tapered anchor bolts, 1 per anchor pad for a total of 4 each.

#### b. COMPRESSED AIR SUPPLY

The compressed air supply is used to reverse jet pulse the dust coated cartridge filters. A 1.5" diameter (minimum) dedicated supply with 80-90 PSI is required. If a 1.5" supply is not available, a 30 gallon accumulator tank must be installed with a 1.5" line from the tank to the collector manifold. The largest supply line available, up to 1.5" should feed the accumulator tank. The unit has a 2" connection.

- Trion Models DC-2 thru DC-4M require 0.5 SCF per pulse @ 90 PSIG.
- Models DC-6 thru DC-18 require 1.5 SCF per pulse
   @ 90 PSIG.
- Models DC-24 thru DC-128 require 2.0 SCF per pulse
   @ 90 PSIG.
- Consult with your Trion distributor for SCFM requirements for your particular system.

The air supply line to the accumulator tank must include water, oil and particulate filtration. Water and/or oil in the compressed air will reduce the effectiveness of the reverse jet pulse cleaning, destroy the cartridge filters and cause excessive differential pressure across the filters resulting in greatly reduced air flow along with premature filter replacement.

Note: The air line must be free of oil and water. Oil and/or water will destroy cartridge filters.

A 160 PSI gage must be installed to monitor air pressure. Prior to the final connection of the air line to the collector manifold, the air line should be purged. This will remove debris that could damage the valves and block the nozzles in the blow pipes.

#### c. ELECTRICAL/ CONTROLS

NOTE: All of the electrical installation must be performed by a qualified electrician and in accordance with the local codes.

The blower motor operates with 208-230/460 volt, 60 cycle, and 3 phase electrical power unless specified otherwise with the equipment order. Electrical power is connected to the J-box on the blower section of the collector. Inside the J-Box is a decal that confirms the voltage the motor was set up for at the factory. Should this need to be changed to the other voltage listed above, the motor will have to be rewired in accordance to

the data label on the motor. Access the motor from the top discharge of the collector.

The blower motor will need to be energized through a motor starter with overload protection. The electrical components must be sized and selected in accordance to the national electric code.

Nominal Full Load Amperes are as follows:

	Voltage			
H.P	208	230	460	
3	11	9.6	4.8	
5	17.5	15.2	7.6	
7.5	25.3	22	11	Full Load Amps
10	32.2	28	14	d A
15	48.3	42	21	oa
20	62.1	54	27	
25	78.2	68	34	ш
30	92	80	40	

Figure 1. Amperage Draw

The blower is designed to rotate clockwise when viewed from the motor side. If the blower is running in reverse, the air volume will be approximately 1/2 the designed air volume and, excessive noise will be generated. Once the motor is wired, energize the blower motor for a brief instant ("JOG"). Check the rotation and if it is in reverse, switch any two input wires of the 3 phases, (T1, T2, and T3).

When the reverse jet pulse cleaning system is initiated, a sequential timer controls the air solenoid valves, releasing a brief burst of compressed air backwards through the filters to expel the collected dust off the filter cartridges and down towards the settling area. This process can be a continuous cycle during normal operation by wiring the sequential timer in parallel with the motor starter coil.

The sequential timer can be activated by monitoring differential pressure across the filters and energizing the timer at a predetermined set point. The timer will continue the reverse jet pulse cleaning until differential pressure is reduced to a predetermined pressure.

An optional microprocessor based sequential timer is available. The microprocessor can be set up to initiate the sequential timer by monitoring filter differential pressure or real time. This is the most versatile control available.

NOTE: A manual that details the operation of each control is available under separate cover. Also, a copy of the control manual is supplied within the control enclosure.

The reverse jet pulse control must be mounted in a safe, accessible location were it can be easily monitored as required. Once mounted, the solenoids on the valves must be wired to the control. As a general rule, the closest valve to the filter access door is valve number 1 and the farthest valve from the door is the last valve of the collector.

The valves operate on 115 volts, 60 cycle, single phase power. The power required is 22 watts. The terminal block on the sequential timer board is labeled for the input power and the valve outputs.

The pulse control requires 115 volts, 60 cycle, singe phase input power. Power consumption is less than 50 Watts. Collectors that are supplied with reverse jet pulse controls that include a "Cycle Down" feature must be wired with a dedicated and continuos 115 volt circuit. If Trion motor-starter is provided, a 110/1/60 step-down transformer is provided to power the cleaning control. If customer provides motor-starter, these controls cannot be wired in parallel to the motor starter transformer.

NOTE: Reverse jet pulse controls with "Cycle Down" feature must be wired with a continuous 115 volt supply. The control must not be wired in parallel with the customer fan motor starter.

The controls that monitor filter differential pressure require pneumatic hoses to be connected. Beside the filter access door are 2 ports for connecting the hoses. They are labeled "HIGH" and "LOW". On the control enclosure are 2 ports also labeled "HIGH" and "LOW". Inter connect these ports with air tight tubing.

#### d. PRE-START UP

Turn the fan "ON" for a brief instant (JOG) and check rotation. Rotation must be clockwise when viewed "OVER THE MOTOR" from the discharge side. If the rotation is correct, start motor.

Assure that rotary air locks, screw conveyors or any other rotating components are rotating the correct direction.

Check to ensure that air leaks do not exist at the seams of any field assembled cabinet components such as hoppers, dust drawers, plenums, filter cabinets, Etc.

Check the compressed air system for leaks. Confirm 80 PSI minimum air pressure and 90 maximum air pressure.

Ensure the compression couplings of the pulse valves are tight.

Energize the sequential timer and set on time for .15 seconds and off time for 30 seconds.

Check each valve to ensure each pulses as required. Check each valve for leaks. It is normal for the bleed air port to release a burst of air at each pulse.

Check adequacy of compressed air supply by ensuring no less than 25% drop in pressure during pulse.

#### e. FILTER INSTALLATION

Should the filters be shipped loose from the collector, they must be installed as follows prior to start up:

Be sure the horizontal flange around the venturi is clean. With care not to damage filter cartridge, place gasket side down on flange. Rotate filter slightly to ensure no binding and proper location on the flange.

Most TRION dust collectors use two filters, stacked vertically on each venturi. Position second filter directly on top of first filter, gasket side down and centered vertically with lower filter.

Place filter cap with gasket side down on top of the top filter cartridge and centered on opening. Turn "T" handle, clockwise, down against filter cap so that the dimple penetrates the threaded bore of the "T" handle. Continue to rotate "T" handle until gaskets are approximately 30% compressed.

#### 3. START UP

New filters should be properly pre-conditioned before start up. Filters can be conditioned in the field. Please contact your TRION Distributor for assistance.

Start system fan and confirm the designed air volume and actual air volume are within 5%. If the air volume is more than the designed volume, adjustments should be made to reduce the volume to the designed volume.

If air volume is low and the contaminate is not being captured, adjustments will need to be made. Consult your TRION Distributor.

Apply compressed air to the manifold. Turn the reverse jet pulse control on. Apply power to other auxiliary equipment as required.

## COMMENTS REGARDING FILTER DIFFERENTIAL PRESSURE DURING OPERATION:

Depending on dust loading and Air-To-Cloth Ratio, reaching equilibrium of filter differential pressure will vary from a few hours to many days. Low dust loading will normally develop 2-3", with 3-5" normal loading and 5 - 8" with high loading.

Low dust loading typically shows a steady level of differential pressure with very little fluctuation once equilibrium is reached. By contrast, heavy loading can produce significant "Ups and Downs" in operating differential pressure.

Make immediate "Off-Time" time reductions on the timer board dial if significant increases in operating differential pressure are discovered to increase pulse frequently. However, if differential pressure decreases or stabilizes during normal operation, increasing the cleaning pulse frequency is not necessary. Increase the frequency as required.

NOTE: A critical step in start up is to reach an acceptable operating equilibrium point. This must be reached gradually in order to not damage the filters by blinding. While achieving equilibrium, you want to clean the filters more often than required in stead of not often enough. Gradually increase valve "Off Time" until equilibrium is reached. Also, making notes and recording the results will help gage the effectiveness of various TRION filters and filter pretreatment. Should questions arise contact your TRION distributor.

#### 4. SHUTDOWN

Shutdown consists of shutting down the blower motor. With systems that include a "Cycle Down" feature, the reverse jet pulse cleaning will be activated. This will clean the filter cartridges while the unit is off line, for a preset amount of time. Once the cleaning cycle is complete, the collector is ready to be energized when needed.

#### CAUTION:

Off line cleaning can cause pressure waves to feed back through the inlet of the collector and the attached ductwork. Precautions might be needed to prevent dusting.

#### 5. MAINTENANCE SAFETY

Care with the design of TRION collectors has minimized safety hazards for the maintenance and production personnel.

#### **CAUTION:**

Personnel involved with the TRION collector must be familiar with the operation and the information in this manual.

- 1. Only competent, safety conscious personnel should have access to the area.
- 2. Work crews should consist of 2 or more people.
- 3. All areas below the collector must be "OFF-LIMITS" when overhead work is performed.
- 4. Objects lifted by crane or hoist must be securely fastened and carefully handled to prevent injury.
- 5. Electrical circuits to the collector must be "locked out".

#### a. MAINTENANCE PROCEDURES

With sound periodic and routine maintenance programs you will receive a long service life from your TRION collector. Schedules should be changed as a result of experience, determined after a reasonable period of operation.

Routine maintenance consists of the following:

- 1. Observe the filter differential pressure at least once every 8 hours of operation. Each application will vary. Refer to "Comments Regarding Filter Differential Pressure During Operation" on page 6.
- 2. Ensure the collected dust is removed from the dust storage container as required.
- 3. Ensure the predetermined cleaning schedule is proper to maintain pressure differential equilibrium.
- 4. Confirm the reverse jet pulse cleaning takes place at the predetermined schedule.
- 5. Observe compressed air supply to confirm pressure of 80 PSI.
- 6. Perform general housekeeping on collector and surrounding area.

#### Periodic maintenance consists of the following:

1. Replace filters when reverse jet pulse cleaning is no longer effective to reduce differential pressure to the normal operating range.

#### **b. CARTRIDGE FILTER REPLACEMENT**

NOTE: Depending on the contaminant being collected, it is advised to wear a dust respirator when handling dirty filters.

Turn the "T" handles counter-clockwise until clearance is obtained. Remove top cover from the top filter. Slide plastic

bag over filter and pull it down to cover top filter and remove. Cover the bottom filter with a plastic bag and remove. Repeat this with all filters.

# NOTE: Discard filters according to all local codes and regulations. Please help protect the environment.

- 2. Clean the internal parts of the reverse jet pulse control with a quality electrical cleaning chemical.
- 3. Clean the internal components of the fan control.
- 4. Remove any accumulated dust from the pressure port that is connected to the Magnehelic Gage or Reverse Jet Pulse Control, or both (This is located inside the dust collector on the dirty air side).
- 5. Replace the cartridge filter caps after every 4th filter change (or before if failure of gasket seal occurs).

#### NOTE: BE CERTAIN THE COMPRESSED AIR IS OFF AND THE PRESSURE RELIEVED BEFORE SERVICING ANY COMPONENTS THAT CONTAIN COMPRESSED AIR.

- 6. Follow the manufacturer's maintenance schedule for the compressed air filters.
- 7. Tighten the couplings of the valves for the reverse jet pulse cleaning.
- 8. Remove any moisture that has accumulated in the compressed air manifold and accumulator.
- 9. Inspect and clean diaphragm valves. A thorough cleaning normally rectifies operational problems with valves; however any worn or damaged parts are to be replaced. Use the following procedure to inspect and repair valves:
- A. Main Diaphragm
  - 1. Switch off air supply and drain the system
- 2. Unscrew the main diaphragm cover bolts and remove the valve cover
- 3. Inspect the spring and diaphragm for dust and damage. Remove dust with water and replace damaged parts with parts kit # 200149 for 1" valves and 200150 for 1.5" valves.
- 4. Replace valve cover and valve cover bolts.
- B. Solenoid Diaphragm
  - 1. Switch off air supply and drain the system
- 2. Unscrew the bonnet bolts and remove the bonnet
- 3. Inspect the spring and diaphragm for dust and damage. Remove dust with water and replace damaged parts with part kit #

200151 for 1" valves and 200152 for 1.5" valves.

4. Replace the valve bonnet and valve bonnet bolts

10. Check and replace, if necessary, the access door gaskets and dust drawer gaskets, if applicable.

#### C. Solenoid Coil

- 1. Switch off air supply and drain system
- 2. Apply proper voltage to the coil and listen for a pronounced "Click" as the pole moves.
- 3. If a pronounced "Click" occurs and the valve does not function, follow instructions B. Solenoid Diaphragm, above
  - 4. If the "Click" is not heard, replace solenoid with part # 200153 for 1" valves and 200154 for 1.5" valves

TROUBLESHOOTING GUIDE				
SYMPTOM	POSSIBLE CAUSE	REMEDY		
Blower does not start	<ul><li>a. Open Electrical supply circuit</li><li>b. Blower motor not wired for available voltage.</li></ul>	<ul><li>a. Trace circuit back from motor and correct interruption.</li><li>b. Rewire motor within motor box for proper voltage per motor data label.</li></ul>		
Blower motor starts but does not continue operating.	a. Incorrect overload protection installed.     b. Loose or incorrect termination of motor wiring     c. Incorrectly sized wired for motor load.	<ul> <li>a. Replace overload protection with correctly sized components.</li> <li>b. Check all terminations of motor wiring.</li> <li>c. Rewire motor circuit with proper wire size.</li> </ul>		
Dust Discharge from collector outlet.	<ul> <li>a. Filter cartridges not properly installed.</li> <li>b. Damaged filter cartridge.</li> <li>c. Damaged filter cap(s).</li> <li>d. Worn filter cap.</li> <li>e. Loose filter clamping "T" handle.</li> </ul>	<ul> <li>a. Reinstall filters according to instructions on page 6.</li> <li>b. Locate and replace damaged filter(s).</li> <li>c. Replace damaged filter cap(s).</li> <li>d. Replace all filter caps.</li> <li>e. Tighten loose "T" handles.</li> </ul>		
Insufficient airflow	<ul> <li>a. Blower rotating backwards.</li> <li>b. Collector not sealed properly.</li> <li>c. Blower exhaust area blocked.</li> <li>d. Filter Cartridges need to be replaced.</li> <li>e. Reverse pulse system ineffective.</li> <li>f. Compressed air containinated with oil or water.</li> <li>g. Pulse cleaning not working.</li> <li>h. Pulse cleaning not set up as required.</li> <li>i. Reverse jet pulse valves not operating.</li> </ul>	<ul> <li>j. Check blower rotation. Blower should be rotating clockwise when looking down over motor. Refer to page 5 under ELECTRICAL for changing rotation direction.</li> <li>k. Check all access panels, doors, dust drawers and dust removal/container connections to assure air tight.</li> <li>l. Check exhaust area for blockage and eliminate all material that cause restrictions.</li> <li>m. Remove and replace filter cartridges per instructions on page 6.</li> <li>n. Increases available air volume, if required. Refer to pages 4 and 5.</li> <li>o. Eliminate source of contamination and purge compressed air line.</li> <li>p. Check red "power on" LED to confirm input power. Check control switch to ensure it is positioned as required (on demand or manual). Refer to control manual for more detail.</li> <li>q. The "on-time" and "off-time" must be set to optimize filter pressure differential equilibrium. Refer to pages 6 and 7 of this manual and to the reverse jet pulse control manual for additional detail.</li> <li>r. Clean, repair or replace valves. Refer to page 8</li> </ul>		

# WARRANTY STATEMENT 1 YEAR LIMITED WARRANTY

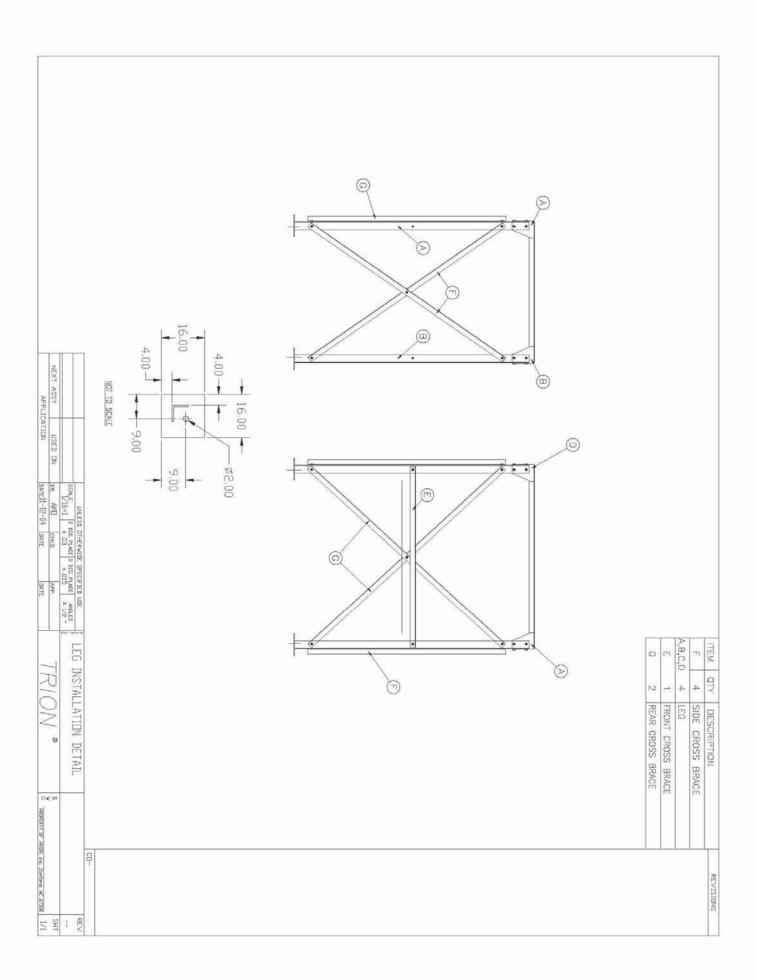
ITEMS NOT COVERED WITH THIS WARRANTY ARE FILTERS AND DUCTWORK, WIRING AND INSTALLATION NOT SUPPLIED BY TRION, INC..

TRION, INC. WARRANTS THAT ALL NEW TRION CYCLONES ARE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USE AND SERVICE. TRION WILL REMEDY ANY SUCH DEFECTS IF THEY APPEAR WITHIN 12 MONTHS FROM THE DATE OF INSTALLATION, SUBJECT TO THE TERMS AND CONDITIONS OF THIS LIMITED 1 YEAR WARRANTY STATED BELOW.

- 1. THIS LIMITED WARRANTY IS GRANTED BY TRION, INC., 101 MCNEILL ROAD, SANFORD, NC, 27330.
  2. THIS WARRANTY SHALL EXTEND TO ANY OWNER WHO HAS PURCHASED THE EQUIPMENT OTHER THAN FOR THE PURPOSE OF RESALE.
- 3. ALL COMPONENTS MANUFACTURED BY TRION, INC. ARE COVERED BY THIS WARRANTY WITH THE EXCEPTION OF FILTERS AND COMPONENTS NOT MANUFACTURED BY TRION, INC.. i.e. ELECTRICAL OR ELECTRONIC EQUIPMENT SUCH AS MOTOR STARTERS, PULSE CONTROLS AND VALVES. THOSE ITEMS NOT MANUFACTURED BY TRION, INC. HAVE A ONE YEAR MANUFACTURERS WARRANTY.

  4. IF WITHIN THE WARRANTY PERIOD ANY TRION UNIT OR COMPONENT REQUIRES SERVICE, IT MUST BE PERFORMED BY A TRION SERVICE REPRESENTATIVE OR TRION DISTRIBUTOR. TRION, INC.. WILL NOT PAY
- PERFORMED BY A TRION SERVICE REPRESENTATIVE OR TRION DISTRIBUTOR. TRION, INC.. WILL NOT PAY SHIPPING CHARGES OR LABOR CHARGES TO REMOVE OR REPLACE SUCH DEFECTIVE PARTS OR COMPONENTS. IF THE PART OR COMPONENT IS FOUND BY INSPECTION TO CONTAIN SUCH DEFECTS IN MATERIAL AND WORKMANSHIP, IT WILL BE EITHER REPAIRED OR EXCHANGED FREE OF CHARGE AND RETURNED FREIGHT COLLECT. ANY PART RETURNED TO TRION MUST BE ACCOMPANIED WITH RA FROM TRION, AND BE PACKAGED TO PROTECT THE ITEM FROM DAMAGE WITH SHIPPING PAID BY THE SENDER. TRION IS NOT RESPONSIBLE FOR LOST OR FREIGHT DAMAGED RETURNS. RETURNS SENT WITHOUT AUTHORIZATION NUMBER WILL BE REFUSED BY TRION AND RETURNED AT SENDERS EXPENSE.

  5. IN ORDER TO OBTAIN THE BENEFITS OF THIS 1 YEAR WARRANTY THE OWNER MUST NOTIFY THE DISTRIBUTOR OR TRION IN WRITING OF ANY DEFECT WITHIN 30 DAYS OF ITS DISCOVERY.
- 6. THIS LIMITED WARRANTY DOES NOT APPLIED TO ANY PART OR COMPONENT THAT IS: DAMAGED IN TRANSIT OR WHEN HANDLING; HAS BEEN SUBJECT TO MISUSE, NEGLECT OR ACCIDENT; HAS NOT BEEN INSTALLED, OPERATED AND SERVICED ACCORDING TO TRION'S INSTRUCTION; HAS BEEN OPERATED BEYOND THE FACTORY RATED CAPACITY; OR ALTERED IN ANY WAY THAT WOULD AFFECT ITS PERFORMANCE. THERE IS NO WARRANT DUE TO NEGLECT, ALTERATION OR ORDINARY WEAR AND TEAR. TRION'S LIABILITY IS LIMITED TO REPLACEMENT OF DEFECTIVE COMPONENTS AND DOES NOT INCLUDE THE PAYMENT OF THE COST OF LABOR CHARGES TO REMOVE OR REPLACE SUCH DEFECTIVE COMPONENTS OR PARTS.
- 7. TRION WILL NOT BE RESPONSIBLE FOR LOSS OF USE OF ANY PRODUCT; LOSS OF TIME, INCONVENIENCE, OR ANY OTHER INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES WITH RESPECT TO PERSONAL PROPERTY, WHETHER AS A RESULT OF BREACH OF WARRANTY, NEGLECT OR OTHERWISE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE EXCLUSION OR LIMITATION IN THE PRECEDING SENTENCE MAY NOT APPLY TO YOU.
- 8. THIS WARRANTY GIVE YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.
- 9. ANY WARRANT WORK WILL BE PERFORMED WITHIN A REASONABLE TIME, USUALLY WITHIN 60 DAYS AFTER NOTICE OF DEFECT AND DELIVERY TO THE TRION FACTORY, SUBJECT TO DELAY BEYOND TRION'S CONTROL.
- 10. ANY WARRANTY BY TRION OF MERCHANTABILITY, FITNESS FOR USE OR ANY OTHER WARRANTY (EXPRESS, IMPLIED OR STATUTORY), REPRESENTATION OR GUARANTEE OTHER THAN THOSE SET FORTH HEREIN, SHALL EXPIRE AT THE EXPIRATION DATE OF THIS EXPRESS LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE LIMITATION IN THE PRECEDING SENTENCE MAY NOT APPLY TO YOU.
- 11. TRION RESERVES THE RIGHT TO MAKE CHANGES IN THE DESIGN AND MATERIAL OF ITS PRODUCTS WITHOUT INCURRING ANY OBLIGATION TO INCORPORATE SUCH CHANGES IN UNITS COMPLETED ON THE EFFECTIVE DATE OF SUCH CHANGE.



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air purification systems
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