



XXP010100

U.S. Design Patent
D604,464 S

U.S. Utility Patent
7,824,457 B2



9-11



Shown with optional Mobile Cart
and 17 Gal. Drum.

May vary slightly in appearance.

Owner's Manual

Oneida Air Systems, Inc. 1001 West Fayette St., Syracuse, NY 13204
Phone 1.800.732.4065 315.476.5151 Fax 315.476.5044 www.oneida-air.com

Thank You for Choosing an Oneida Air Systems Product!

OAS manufactures and sells dust collection equipment only. Our qualified technicians and sales staff are available 8:30am - 6:00pm EST Mon. - Thurs. and 8:30am - 5:00pm EST Fri. to answer any questions concerning OAS products and dust collection. Call for ductwork design and ductwork quotes, including system pricing and shipping cost.

Read the entire Owner's Manual before installing or operating system!

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in the USA*



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For Customer Service:

866 - 387 - 8822 or customerservice@oneida-air.com

I. System Start-Up Information

1. Read the installation and maintenance instructions as well as the recommended safety practices in this manual.
2. Have Dust Bin in place and sealed before running collector.

Caution

The Dust Collector & Fan is heavy! Handling and installation should always be performed by healthy individuals. Additional help may be required. In addition to the following instructional manual, care should be taken to ensure compliance with specific safety requirements mandated by federal, state and local codes.

Warning

Keep clear of exhaust. Keep hands and objects clear of inlet and outlet.

Warning

Make certain amperage is not outside operating limit indicated on motor plate! If amperage is too high - shut down immediately! (See Troubleshooting section.)

II. General Specifications

1.5hp Mini Dust Gorilla™ System - XXP010100

- ▶ 600 cfm
- ▶ Industrial Baldor TEFC 1.5hp motor
 - 110 / 230v - 16 / 8 amps / 1.15 Service Factor
- ▶ 5" dia. inlet
- ▶ Composite fan wheel - Backward inclined, non-sparking, non-ferrous.
- ▶ Sound 76 dBA
- ▶ GE Certified (H-12) HEPA Media / MERV 16+ rated

If you wire your system for 230V power, you will need a different starter. Call for specifications.

III. Filter Maintenance

External Filter Cartridge Cleaning Intervals

Remove filter from collector. Hold nozzle at least 6" away from filter pleats* Wear a mask, safety glasses and do it outside.

**WARNING: A close, direct blast with the compressed air nozzle too close to filter, may damage filter media. Always wear safety glasses and mask while blowing off filter.*



Caution: Fine dust collected in filter is hazardous to your health! Do not breathe!

Cleaning Procedures for HEPA Filters

A hand-held compressed air nozzle should be used to backflush (with 30 - 60 psi air) by running the nozzle up and down the exterior of the filter cartridges. If a residue on the inside (ePTFE membrane side) of the filter cartridge remains, low velocity compressed air may be used directly on the inside, *but care must be taken not to damage the membrane.*

If there is significant backside blinding, compressed air may be used. However, forcing the dust further into the media from the backside is likely.

Washing the filter cartridge with a high pressure water jet or stream is not recommended. Washing in place must be done only after air cleaning and with no greater than 40 psi water, unassisted by a nozzle or jet acceleration. A water force similar to a soft garden spray attachment is appropriate. Filter must be thoroughly dry before using again.

Gasket Repair / Replacement

Gaskets may become loose over time and should be repaired or replaced as follows:

1. Remove the gasket completely. Excess adhesive should be removed from the endcap.
2. Roughen the surface of the endcap where the gasket attaches with an emery cloth.
3. Clean the gasket and endcap with isopropyl alcohol to remove residue.
4. Apply liquid silicone (GE RTV-118) to the endcap and attach the gasket.
5. Apply a small bead of silicone (GE IS808) to ID and OD of the gasket.
6. Allow the silicone adhesive to cure a minimum of 24 hours before using the filter.

IV. Parts List

Wire for the Dust Sentry™



1. Unpack contents of all boxes.

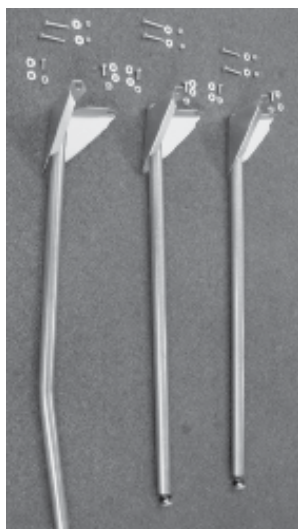
XXP010100 - 1.5hp System:

- BXI001605 (1) Blower 1.5hp
- SCX001605 (1) Cone
- FCS131340H (1) 13"x 13" GE Certified (H-12) HEPA Media / MERV 16+ rated filter
- DHF050000 (10") Flex Hose 5" dia.
- ZBM000024 (1) Mini-Gorilla Owners Manual
- AHX001605 (1) Hardware Kit
- AFB155175 (9) 5/16" - 18x 3/4" Hex Head Bolts
- AFJ051602 (3) J Bolt 5/16" - 18x 2"
- AFS013000 (2) Screws Self-Tapping 8-18 x 3/8
- AFS015920 (4) Bolt 1/4" - 20x 3/4" Hex Head
- AFT000001 (3) Thumb Nut 5/16"x 18
- AFT025200 (4) Nut 1/4 - 20 U Spring
- AFT155175 (9) Whiz Lock Nut 5/16
- AFW025000 (4) Washer Flat USS 1/4"
- AFW180000 (18) Washer Flat USS 5/16"
- RCP050000 (1) Silicone Plug .438"x .687"x 1"
- RGZ025050 (5) Gasket 1/4"
- ACB060000 (2) Clamp Band 3 - 6"
- FGA000001 - 14" Grounding Cable



STG001600 - Mobile Cart

- VRT010004 (1) Stand Leg Front
- VRT010003 (2) Stand Leg Rear
- STP001605 (1) Base Tray
- RSR320050 (1) 1/2" Rod 32.5" L
- AHX001600 (1) Hardware Kit
- AFB025200 (6) Carriage Bolt 1/4" - 20x 2"
- AFB038001 (2) Eye Bolt 3/8" - 16 x 1"
- AFS125016 (2) Threaded Tube Connect 1 1/4" x 16
- AFT000050 (2) Cap Nut Unthreaded Shaft 1/2"
- AFT900006 (6) Nylock Nut 1/4 - 20
- AFW025000 (6) Washer Flt USS 1/4"
- AFW050000 (4) Washer Flat 1/2
- RFG010000 (3) Stand Top Gusset
- RHC000005 (1) Caster 3" Brake Thrd. Stem
- RHW000080 (2) Wheel 8" x 175 Diamond Tread



SMS001600 - Wall Bracket

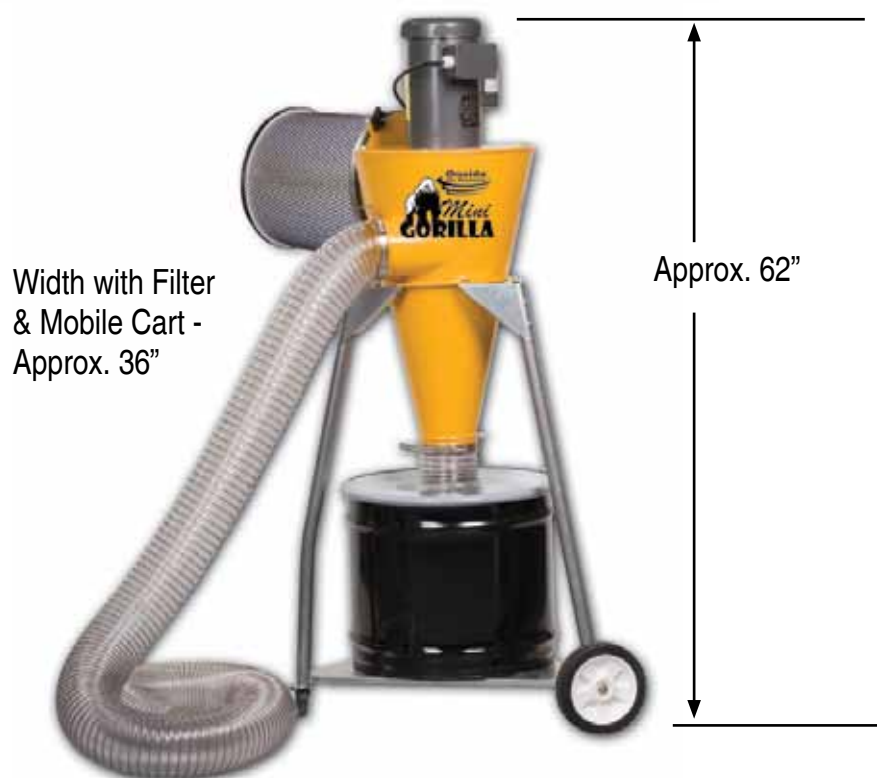


SEK170501 - 17 Gal. Steel Drum Kit

- SFX170500 (1) Drum Lid 5" Inlet
- SES170000 (1) 17 Gal. Steel Drum



V. Dimensions



VI. General Assembly Instructions

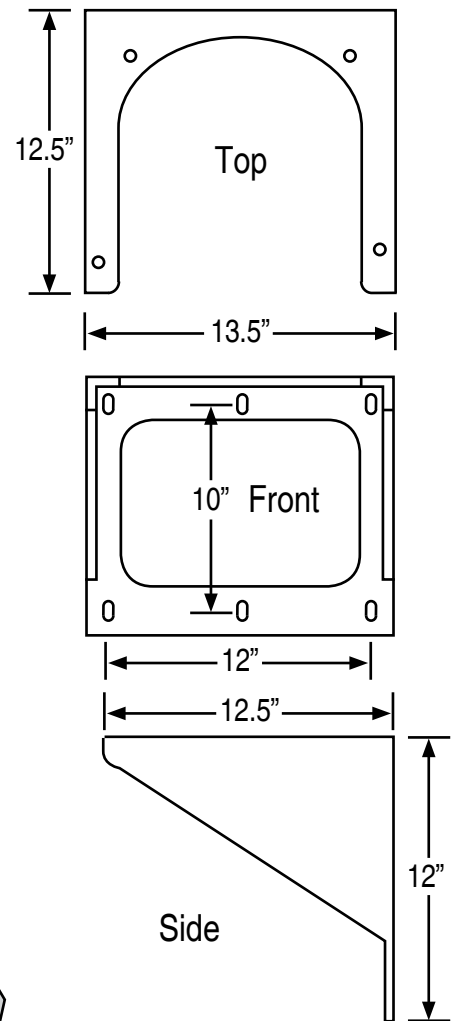
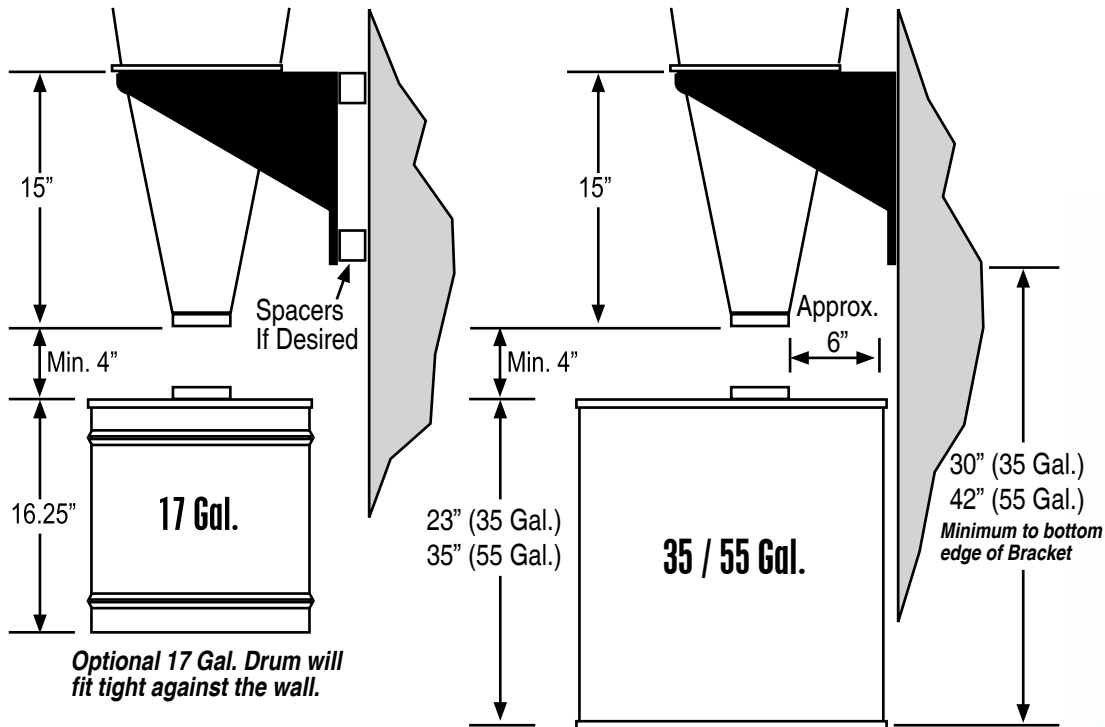
Assembly Instructions for Wall Bracket

1. Before you attach the wall bracket to the wall, you must determine the proper height the collector has to be hung at. This height will be determined by the height of the dust drum you are using.

2. There are two ways to attach your collector to a studded wall. You can either attach a sturdy board between two studs and then attach the wall bracket to the board or using the center slots, attach the wall bracket to a single stud in the wall. Use the appropriate hardware to hold the bracket to the wall. The collector and wall bracket are heavy. Make sure the bracket is level when it is attached.

3. The collector can only be attached to the wall bracket with the cyclone inlet in front as shown in picture. Line up the holes in the cyclone support ring with the slots in the top of the wall bracket and use the provided bolts, two washers and nut to attach the collector to the bracket through the three slots in the bracket.

**Note: A spacer may be needed between the bracket and the support wall so the flex hose from the bottom of the cyclone lines up with the dust drum opening.*



Shown with 35 Gal. Drum.

Assembly Instructions for Motor and Cyclone

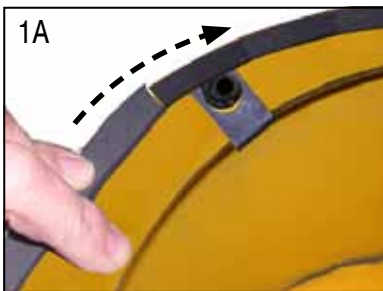
To attach motor to cyclone.



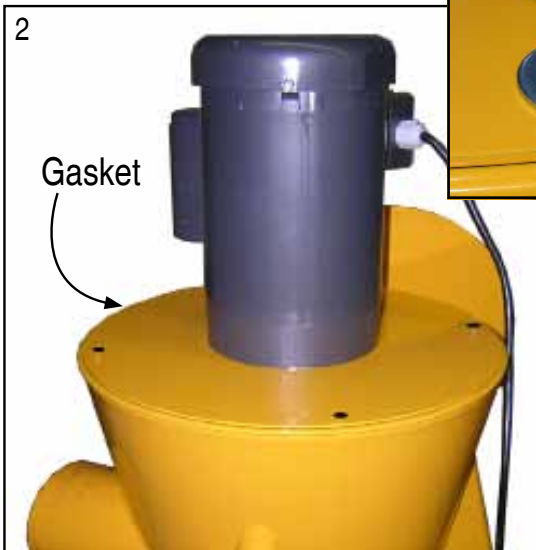
If you are assembling with the mobile cart, go to Pg. 8 first.



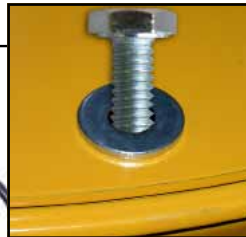
1. Take supplied clips and slide over rim of cyclone making sure flat part of clip is on the top and hole in clip is aligned with hole in cyclone rim.



1A. Peel paper backing off of gasket material and attach to top of cone outside of clips as shown, making sure there is no gap in gasket where ends meet.



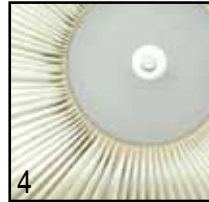
2. Carefully, with help, lift Fan Blower (It is heavy!) onto top of cone, aligning holes with clip holes. Put washer over hole, then put bolt in and tighten carefully. No nut is needed.



3. Attach the Magnetic Starter to a leg with supplied clamps with bolts if you have the mobile cart or a sturdy surface if you are wall mounting it.



The extra wire coming out of the electrical box on the motor is for use with the Dust Sentry™ only.



4. Plug hole in filter plate with the included plastic plug from inside of filter as shown.

5. Hook J - Hook over metal lip of filter and secure with black thumb nut



6. Attach filter to plate as shown using the (3) J - Hooks and Thumb Nuts. Make sure that rubber gasket is tightly and evenly compressed against the collector plate.



Drum Grounding Wire

To attach the Drum Grounding Wire, start a small hole in bottom of cone above flex hose and in the top of the dust drum, then attach the wire with the 3/8" included self-tapping screws.

Clamp Drum top to Dust Drum then attach flex hose to top of drum with Band Clamp and attach other end to bottom of cone with another band clamp. You may need to shorten length of flex hose to fit underneath cone.



Attach included 10' of 5" dia. flex hose to inlet with band clamp and your system is ready to go!

Assembly Instructions with the Mobile Cart

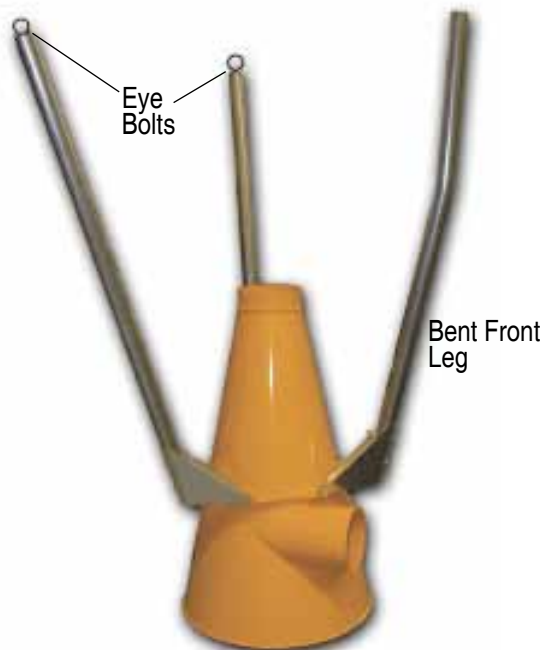
1. Start with Cone. Do not attach motor until the cart is fully assembled.

Eye Bolt & End Cap

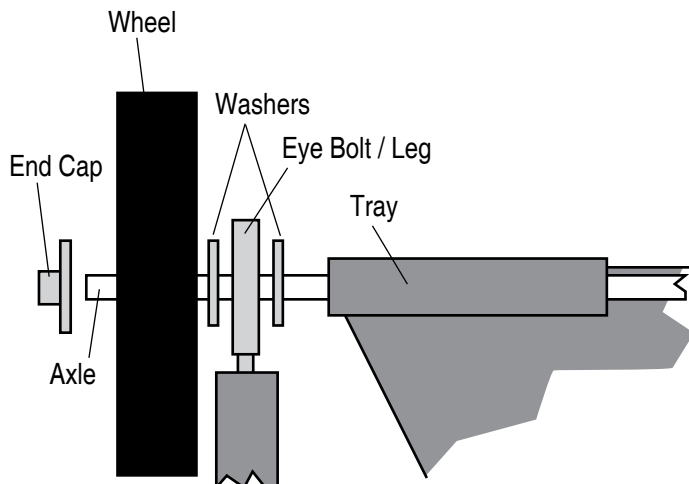


2. Before you attach the legs to the bracket, you must put end caps in the back legs. Screw an eye bolt into the end cap as shown above. Leave about 1/4" of thread showing. Then gently with a hammer, hit the eye bolt to force the end cap evenly into the leg end until it is flush and centered. The axle goes through the back leg eye bolts.

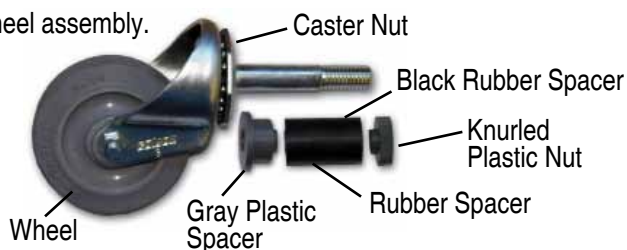
Using the provided longer bolts, attach the legs to the brackets, then put the bracket and leg on the underside of cone ring as shown and attach with the shorter bolts. Make sure the bent leg is in front and the straight legs with the eye bolts are in the back.



3. Put end cap on axle then put on wheel / washer / through the eye bolt / washer then through the tubes on the bottom of the tray as shown in diagram below, then repeat on the other side.



Front wheel assembly.



4. Put wheel through front tab on bottom of tray then reassemble wheel unit with Gray spacer, Rubber spacer and knurled nut. Tighten knurled nut to expand rubber spacer so wheel fits snugly in front leg but do not over tighten.

5. Put assembly in leg then tighten Caster Nut above tab with wrench to tighten wheel in leg.



6. Cyclone should be mounted to mobile stand. Carefully, with help, flip cyclone cone right-side up and proceed with assembly of Motor / Fan Wheel to the top of the Cyclone using the instructions from the previous page.

VII. Fan Motor Maintenance

Per Baldor specifications, their 2 pole motors (3600 RPM) motors are to be relubricated **every 5500 hours**.

Table 1 - Service Conditions

Severity of Service	Ambient Temperature Maximum	Atmospheric Contamination	Type of Bearing
Standard	40° C	Clean, Little Corrosion	Deep Groove Ball Bearing
Severe	50° C	Moderate dirt, Corrosion	Ball Thrust, Roller
Extreme	>50° C* or Class H Insulation	Severe dirt, Abrasive dust, Corrosion	All Bearings
Low Temperature	<-30° C**		

* Special high temperature grease is recommended.

** Special low temperature grease is recommended.

Table 2 - Lubrication Interval Multiplier

Severity of Service	Multiplier
Standard	1.0
Severe	0.5
Extreme	0.1
Low Temperature	1.0

Per Baldor specifications, add .30 ounces (8.4 grams) of Mobil Polyrex grease by weight or .6 cubic inches (2 teaspoons) of Mobil Polyrex grease by volume.

Procedure

Clean the grease fitting (or area around grease hole, if equipped with slotted grease screws). If motor has a purge plug, remove it. Motors can be re-greased while stopped (at less than 80 C) or running. Apply grease gun to fitting (or grease hole). Too much grease or injecting grease too quickly can cause premature bearing failure. Slowly apply the recommended amount of grease, taking 1 minute or so to apply. Operate motor for 20 minutes, re-install purge plug if previously removed. Caution: Keep grease clean. Mixing dissimilar grease is not recommended.



Grease Fittings Locations

VIII. Troubleshooting

Motor Overheating

The motor's internal circuit breaker will trip if the motor is overheating.

Motor amperage too high - Shut system down.

Caused By:

- System should be completely bolted and sealed together.
- Ductwork should be completely installed and sealed with sealant.
- Air leaks between the collector and dust bin.
 - The lid of the dust bin and the cyclone must be in place and sealed when operating the dust collector.
 - Make sure flex hose is not torn and the hose clamps are tight.
 - Check drum lid; cover should have a foam seal and be well seated.
 - Check for holes or leaks in the dust bin barrel.
- Motor not properly wired. Check wire connections.
 - Check motor rotation - See wire diagram
- Check breaker box. Make sure incoming power supply matches motor specifications.

Note: If you continue to experience difficulty with your collector, call Oneida Air Systems at 1.800.732.4065 for assistance.

Poor Dust Pick-Up at Woodworking Machines

Caused By:

Improper motor rotation - Running backwards will reduce suction by 30%.

- Make sure all ductwork is sealed. Large air losses will occur even through small cracks in the ductwork.
- Use silicone, duct tape or duct mastic compound as a sealant.
 - Check for air leaks between collector and dust bin.
- Close all unused blast gates at your woodworking machines.
- Examine hood design for weaknesses according to the ductwork guide.
- Check for a restricted pipe, too small a hood port or too small a branch line. See branch line diameter chart in ductwork guide.
 - Be sure that your filter is clean. See filter cleaning directions.

Filter Clogging

Caused By:

- Air leakage between cyclone and dust bin. Cyclone and dust bin must be air tight. Even small leaks can will cause poor pre-separation in the cyclone.
- Large chips clogging the filter:
 - Check for a leak in the dust bin, flex coupling or lid. Check for split or torn flex coupling. (See also: Motor Overheating Section above.)
 - Make sure dust bin has not over filled. Dust bin should be emptied before dust reaches top of container.
 - Interruption of air flow, such as vacuuming chips with a flex hose connection, will increase filter maintenance.
 - Minimum 4" diameter pick up at tool location. Less than 4" will restrict air flow into collector and will increase filter maintenance, If there is not enough air entry in system, open more blast gates.
 - Make sure clamp around cyclone is tight and sealed with silicone.

Excessive Vibration

Caused By:

- Loose mounting bolts.
- Excessive system pressure or restriction of air due to closed blast gates.
- Accumulation of foreign material on the fan wheel.
 - Inadequate support structure.

IX. General Safety Recommendations - *Read Before Installing and Operating.*

Oneida Collectors are designed for WOOD Dust only!!

Wood shaping and cutting processes generate wood chips, shavings and dust. These materials are considered combustible. Air-borne wood dust below 420 microns in size (.017 of an inch) in certain concentration ranges when ignited can deflagrate (burn quickly). An ignition source such as a spark, or ember, can ignite a dust mixture resulting in an expanding flame front, which can cause an explosion if tightly contained. A disturbance that raises a cloud of accumulated fine dust can raise additional dust clouds, which can cause a series of explosions that can level an entire building. Until this type of fire has been witnessed, it is difficult to believe the devastation. This type of fire is rare but worth safeguarding against.

The best way to avoid a wood shop fire is to keep the shop clean. A shop ankle deep in dust with layers of fine dust everywhere is an accident waiting to happen. A good dust collection system reduces overall fire hazards but also adds new concerns. A fire hazard is still present. Combustible material is now in the dust collector and storage container.

The following points are worth heeding:

- It is the buyer's responsibility to follow all applicable federal, state, local, OSHA, NFPA, or authorities having jurisdiction codes and regulations when installing and operating this dust collector.
- Fire Marshalls may want the unit located outside of the building. If the collector is located inside the facility, controls such as spark detection, suppression, or explosion venting may be required.
- Most local jurisdictions consult or adopt NFPA (National Fire Protection Agency) codes. However, other codes may apply. Local codes may vary from jurisdiction to jurisdiction.
- NFPA 664 Code book, "Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities", applies to woodworking operations that occupy areas of more than 5,000 sq. ft. or to areas where dust producing equipment requires an aggregate dust collection flow rate of more than 1500 cfm (cubic feet per minute). This exempts some small operators from the NFPA code 664, but other codes may apply in your jurisdiction. Consult your local Fire Marshall for help. Additional information can be found in NFPA Code Book 664.

The customer assumes the responsibility for contacting their insurance underwriter with regard to specific application requirements of explosion venting or if additional fire protection and safety equipment may be required.

- **Do not use this product to collect other types of dust or flammable vapors.**
- **Fire or explosion may occur!**
 - Never collect sparks from a bench grinder into a wood dust collector.
 - Never introduce sparks or sources of ignition into the dust collector.
 - Personnel should keep at least 20 feet away from unit.
 - Check dust bin frequently and before leaving the shop for smoldering material.
- **Keep portable Fire Extinguishers handy.**
 - The ABC type (dry chemical) is generally a good choice for small wood shops.
 - Additional information on portable extinguishers can be found in NFPA 10 (Standard for Portable Fire Extinguishers).
 - Be especially careful with sanding units. They can produce concentrations of dust in the combustible range. Make certain enough air volume is at the suction point to capture all the particulate generated.
 - Empty dust bin and clean filter often, especially when sanding.
 - Don't overload woodworking equipment, especially sanders. Excessive frictional heat can spontaneously ignite dust.
- **Sparks can be generated in several ways:**
 - High-speed sanders and abrasive planers may strike foreign material.
 - Saws and edgers may strike foreign material and create a red hot metal fragment.
 - Knots in hardwood can create frictional sparks.
 - Tramp metal when drawn into the collector can spark against ductwork.
 - Check wood stock for old nails and screws which can create red hot metal fragments.
- **Avoid excessively large wood waste storage bins.**
- **Always check storage bins for smoldering material before leaving for the day. Electrically ground all equipment and ducting. Static sparks can ignite wood dust. (Avoid using PVC drainpipe). Don't allow accumulation of layers of fine dust on horizontal surfaces. (Especially overhead lights, electrical boxes, and fuse panels which can ignite).**

How to Order

► Phone - 1.800.732.4065 Toll-Free

Our hours are Monday - Friday 8:30am - 5:00pm EST

► Internet - www.oneida-air.com

You can shop on our online web store 24 hours a day.

E-mail us at: info@oneida-air.com.

► Mail - Oneida Air Systems, Inc. 1001 W. Fayette St., Syracuse, NY 13204

You can mail in your order and we will send you back a confirmation by e-mail, fax or mail. Be sure to include your name and a daytime phone number.

Methods of Payment



Checks, Money Orders or C.O.D.

Terms and Conditions / Shipping

Oneida tries to ship orders out in a timely manner, however sometimes delays and back orders are inevitable. Oneida will not be held responsible or liable for these conditions or the way they may effect your production. Back orders will be shipped when they are available. When orders are shipped UPS, UPS will notify you by e-mail. If shipped by Common Carrier, you can arrange for the trucking company to notify you and make arrangements for delivery. Shipping method is determined by Oneida Air Systems and is dependent upon material to be shipped and destination. You are not charged until your order is shipped.

► Checking in Order

Please look over the shipped order very carefully in the presence of the delivery person for damage or incomplete shipment before signing the delivery receipt. Please note any tears or irregularities in shipping packaging, however slight, on the shipping delivery receipt. This could be an indication of extensive concealed damage. The shipping company will not take responsibility if the damage is not noted on the delivery receipt. In the event of shipping damage, call OAS Customer Service immediately at 1.800.732.4065 so we can expedite replacements. Please check in all parts within 3 days from receiving order. Notify OAS immediately of any missing or incorrect parts. OAS does not accept any claims for damage or shortage after 3 days from date of delivery.

► Limited Warranty

Oneida Air Systems™ warrants the products manufactured by Oneida Air Systems, for a period of 1 or more years depending on the product, to the original purchaser from the date of purchase unless otherwise specified. Purchaser is responsible for returning warranty items to OAS at their expense. All parts must be returned with an OAS provided Returned Material Authorization Number (RMA#). Any shipment without an RMA will be refused. Items not manufactured by Oneida Air Systems are limited to their own manufacturer's warranties. All electrical items such as magnetic starters, remotes, sensors, pumps and accessories are limited to 90 days. Oneida Air Systems warrants that the product will be free from defects in materials and workmanship. This warranty does not apply to defects due directly or indirectly to misuse, negligence, accidents, abuse, repairs, alterations, improper wiring or lack of maintenance. This is Oneida Air Systems sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. Oneida Air Systems does not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Oneida Air Systems' liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Oneida Air Systems shall be tried in the State of New York, County of Onondaga.

ONEIDA AIR SYSTEMS SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY OR FOR INCIDENTAL, AND CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCT.

Safety Warning - Please Read

Before Purchasing or Installing a dust collection system the buyer is cautioned to do so in accordance with prescribed Federal, State, Local, OSHA, NFPA, and any other applicable codes or regulations relating to the type of dust(s) you are collecting.

SOME TYPES OF DUST UNDER CERTAIN CONDITIONS HAVE THE POTENTIAL TO BE EXPLOSIVE.

Oneida Air Systems is not responsible for how the dust collector is used or installed. Dusts with deflagration or explosion risks, such as wood dust, may require additional safety equipment including but not limited to; venting, spark detection, suppression systems, back draft dampers or may require installation in an outside location or in a protected area away from personnel. The customer assumes the responsibility for contacting their insurance underwriter with regard to specific engineering controls or application requirements. (We suggest you reference NFPA 664, 654 and 68 codes for more information) Oneida Air Dust Collection Systems may not be suitable for some applications and are not designed to be used in explosive atmospheres. **Oneida Air Systems equipment should only be installed and wired by a licensed electrician following all applicable local and national electrical codes.**

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. Oneida Air Systems recommends using additional approved safety equipment such as an approved OSHA and NIOSH dust mask or respirator.

Oneida Air Systems makes every effort to accurately represent our products, specifications and prices; however Oneida Air Systems reserves the right to make changes to products and prices at any time. As a manufacturer, Oneida Air Systems reserves the right to change product designs and specifications at any time.

► Delivery Risk of Loss

Products will be shipped to Buyer's single destination. Title and risk of loss shall pass to the Buyer upon delivery to such destination. Buyer pays transportation expenses. Dates of shipment are advisory and Oneida Air Systems will make reasonable efforts to ship on or before the date states for shipment, however, Oneida Air Systems shall not incur any liability for failure to ship on that date.

► Returned Goods Policy

Buyer must inform Oneida Air Systems of any shortage or damage, by so noting in writing, on the freight delivery bill prior to signing to indicate receipt of shipment. All claims covered under the limited warranty, are subject to inspection and investigation by Oneida Air Systems. Oneida Air Systems reserves the right to inspect and investigate all returned products before Buyer's claim is settled. All products returned for a refund must be unused and resalable and purchased within the last 30 days.

There are no refunds on flex hose or custom made components. There will be a 25% restocking fee applied to any returned items. Buyer must call and obtain a Return Material Authorization Number (RMA #) prior to making a return. All merchandise must be shipped to us prepaid.