

**VENT BOSS**<sup>®</sup>  
by **RoboVent**<sup>®</sup>

MODELS

S310  
S311  
S312  
S313  
S314  
S315  
S316  
S317  
S318  
S319  
S320  
S321  
S350

# SERIES 300

SPACE SAVER COLLECTORS



**OWNER'S  
MANUAL**

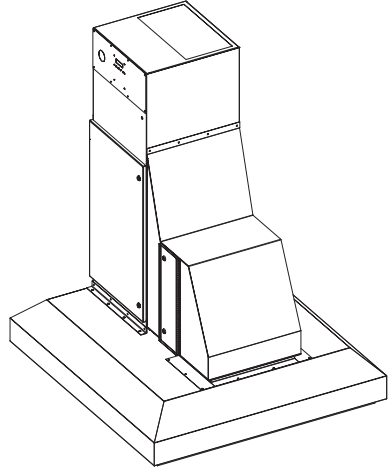
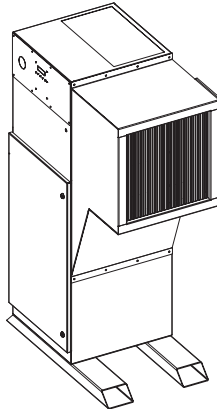
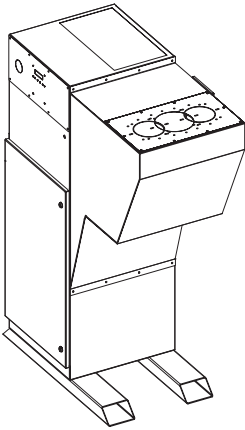
**Installation,  
Operation  
& Maintenance**





# OWNER'S MANUAL

## Installation, Operation & Maintenance



**Models:**

S310    S316  
S311    S317  
S312    S318  
S313    S319  
S314  
S315

**Models:**

S320  
S321

**Models:**

S350

Manufactured by:

**RoboVent**

**37900 Mound Road    Sterling Heights, MI 48310    USA**

**(855) 558.VENT    [www.ventboss.com](http://www.ventboss.com)**

# CONGRATULATIONS!

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Dear Customer,

Thank you for purchasing a VentBoss product. This manual will help you use the many features available to customize the unit to your specific welding needs.

When your VentBoss needs scheduled maintenance, keep in mind that VentBoss has specially trained staff in servicing our equipment. We would be pleased to answer your questions and concerns you may have.

At VentBoss we are committed to making your shop/factory a safe and healthy environment for your workers. Please take time to read this manual thoroughly before installing and operating the unit.



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Appendix A: Fume Arm Installation, Operation & Maintenance

# IMPORTANT SAFETY INSTRUCTIONS

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**CAUTION:** Failure to follow all instructions may result in electric shock, bodily injury and possibly severe damage to the unit.



**CAUTION:** Use of controls, adjustments or performance of procedures other than those specified herein, may result in electrical shock.

## IMPORTANT SAFETY INSTRUCTIONS

1. Read all instructions thoroughly.
2. Heed all warnings.
3. Do not block the intake or exhaust grills of this unit. Keep the intake free from debris and materials that could restrict airflow. Prolonged restriction could damage the motor and electrical components. The mesh panels of the intake are designed to obtain uniform air distribution. Any disturbance of this flow will decrease efficiency.
4. Refer all service matters to qualified service personnel. Repair and / or servicing is required when the unit is damaged in any way such as controls, supply wiring or in the case of excessive filter loading.



**DANGER:** Risk of serious personal injury or death! Use extreme care to make sure you are never in a position where your body (or any item you are in contact with, such as a screwdriver or test instrument) can accidentally touch the blower wheel.

# FEATURES OF THE SERIES 300 COLLECTORS

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**FIGURE 1**

## 1. Quiet Operation

A built-in acoustic lining of high density sound absorbing materials has been implemented as part of the blower compartment. The acoustically designed plenum greatly reduces motor and blower noise levels and decreases ambient noise to the facility.

## 2. Heavy Duty Construction

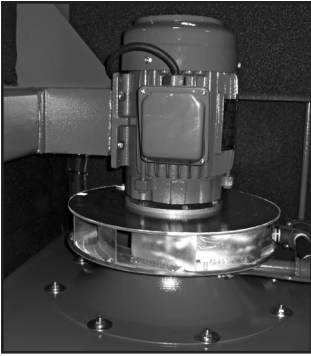
Each VentBoss Series 300 fume collector comes with our heavy duty 14 gauge steel construction and quality built guarantee. A durable high temperature cure powdercoat finish give excellent long term protection to the cabinet.

## 3. Easy Access Filter System

For your convenience the VentBoss Series 300 units are all designed with our proprietary SnapLock filter system, which allows the filter to be removed in seconds. Changing filters is a rapid and simple procedure, and eliminates any need to undo nut, bolts or threaded components, which are particularly prone to clogging and jamming inside a dust collector cabinet.

## 4. High Grade Merv 13 Filter

A High Grade, Fire Retardant, hybrid poly/cellulose Merv 13 Filter comes standard with each VentBoss Series 300 unit which contributes to its high efficient filtration. This durable filter media is manufactured specifically for welding and metal working operations, giving extended filter life, enhanced by the filter pulse cleaning system to pulse off captured dust, smoke and particulate. (Figure 1)

**FIGURE 2****5. High Performance Blower**

The aluminum Acoustafoil blower is the heart of the VentBoss Series 300 units. The backward inclined centrifugal blower is dynamically balanced when the complete unit is assembled, prior to the unit being approved to ship from the VentBoss assembly plant. (Figure 2)

**6. Built-In Spark Arrestance**

The VentBoss internal SparkOut plenum quickly extinguished sparks created through the welding or grinding process.

**7. Built-In Pulse Cleaning**

A powerful back flush cleaning system delivers high pressure air into the inner core of the cartridge filter. This powerful cleaning system releases dust cakes from the outside of the filter where they are collected in the containment for removal.



**Receiving**

VentBoss equipment is typically shipped on skids or in crates. The number of skids/ crates will vary, depending on the type, size and accessories ordered. These skids/ crates are too heavy to lift by hand, and will need to be unloaded by an industrial forklift or similar equipment.

**Inspection**

A visual inspection of your equipment should be performed before it is removed from the truck. Dents, scratches, and other damages should be noted on the shipping documents, and also photographed. The structural integrity of the housing can be adversely affected by large dents. VentBoss should be immediately notified of any structural damage to your equipment. It is the purchaser's responsibility to file shortage reports and damage claims with the carrier and with your VentBoss Representative. The carrier is responsible for any damage to the equipment while it is in transit unless specific arrangements are made otherwise.

Compare the number of items received against the carrier's bill of lading. Inspect all items for apparent damage. Immediately report any shortages or obvious damage to the carrier and to your local VentBoss Representative, call the factory at 1 (855) 558.VENT, or email: [customer.service@ventboss.com](mailto:customer.service@ventboss.com).

When all skids are completely unpacked and uncrated, check all items received against the packing lists. Further inspect the unit and components for hidden damage. Again, report any shortage or damage to the carrier and to your local VentBoss Representative.

The filter cartridges are typically shipped installed in your collector. Be sure to check them for alignment, as they may have shifted during transit. If they have shifted, it is possible that damage may have been done. Remove all filter cartridges and inspect thoroughly.

**Note: Do not return any damaged components without first contacting your VentBoss Representative to obtain a Returned Goods Authorization (RGA).**

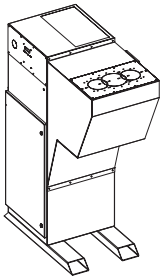
**Small Parts**

Carefully inspect all packing material before it is discarded, to be sure that no small parts have been missed.

## SECTION 400 EQUIPMENT CONFIGURATIONS

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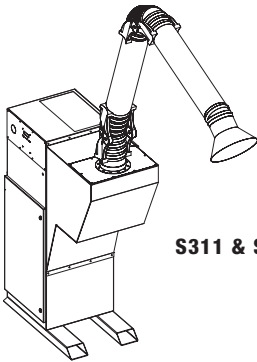
### Models: S310, S311, S312, S313, S314



**S310**

VentBoss model S310, S311, S312, S313 and S314 fume collectors are a compact, portable or stationary, floor-mounted filtration systems that will supply years of low maintenance operation. Delivering over 1500 CFM of air filtration power, the VentBoss 300 Series collector can be placed into any area where welding is performed.

The S310 includes a standard intake.



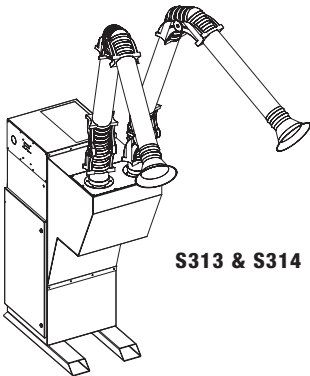
**S311 & S312**

The S311 includes an 8" diameter by 10' externally articulated fume arm with hood.

The S312 includes an 8" diameter by 14' externally articulated fume arm with hood.

The S313 includes two, 6" diameter by 10' externally articulated fume arms with hoods.

The S314 includes two, 6" diameter by 14' externally articulated fume arms with hoods.

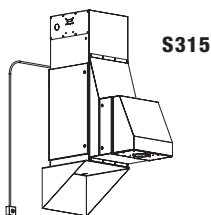


**S313 & S314**

Easily converted for multiple applications, VentBoss Series 300 collectors can be customized with additional fume arms or Quick-Clamp ductwork to provide dust and fume collection for various applications.

## SECTION 400 EQUIPMENT CONFIGURATIONS (continued)

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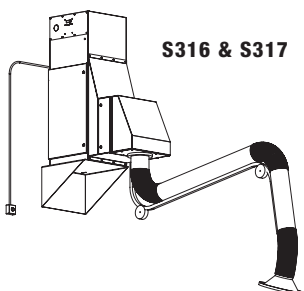


**S315**

### **Models: S315, S316, S317, S318, S319**

VentBoss model S315, S316, S317, S318 and S319 fume collectors are a compact, portable or stationary filtration systems that will supply years of low maintenance operation. Delivering over 1500 CFM of air filtration power, the VentBoss 300 Series collector can be placed into any area where welding is performed.

Models S315, S316, S317, S318 and S319 can be wall mounted or hung from the roof or overhead structure.

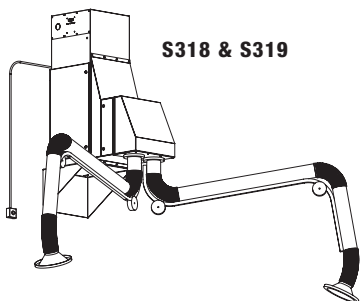


**S316 & S317**

The S315 includes a standard intake.

The S316 includes an 8" diameter by 10' externally articulated fume arm with hood.

The S317 includes an 8" diameter by 14' externally articulated fume arm with hood.



**S318 & S319**

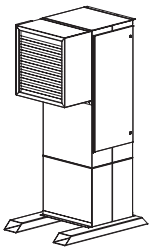
The S318 includes two, 6" diameter by 10' externally articulated fume arms with hoods.

The S319 includes two, 6" diameter by 14' externally articulated fume arms with hoods.

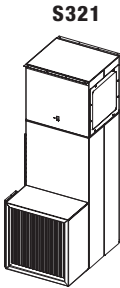
Easily converted for multiple applications, VentBoss Series 300 collectors can be customized with additional fume arms or Quick-Clamp ductwork to provide dust and fume collection for various applications.

**SECTION 400**  
**EQUIPMENT CONFIGURATIONS** (continued)

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**S320**



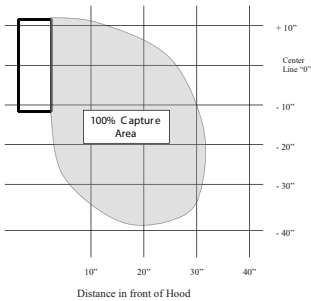
**S321**

**Models: S320 and S321**

The VentBoss S320 and S321 operate on a “Back Draft” principle. They can potentially draw the smoke from as far as 30" away from the worker as shown in the diagram. The smoke is then filtered through the high efficiency Nanofiber MERV15 cartridge filter and returns clean air to the plant.

The S320 is configured to stand on the floor and sit on 3" x 6" tubular legs that double as fork pockets.

The S321 can be wall or ceiling mounted above the work site to save valuable floor space.



**Large Smoke Capture Area**

The VentBoss S320 and S321 have the largest smoke capture area than any equivalent backdraft unit available currently. The VentBoss S320 and S321 has been field tested and has a capture area of over 30" away from the face of the backdraft intake.



**S350**

**Model: S350**

The VentBoss S350 is a unique and simple solution for processes that produce smoke and fumes. The smoke is drawn up to the canopy and away from the worker making it a cleaner and safer environment for each employee.

The model S350 includes a 64" x 60" wide hood, 83" high, Pulse Cleaning System and rated for 1500 CFM @ 4.5" W.G.

Each VentBoss S350 unit can be set up for different applications. Call 1-855-558-VENT to talk with one of our professional consultants to set up your VentBoss for custom applications.

## SECTION 500 INSTALLATION



FIGURE 3

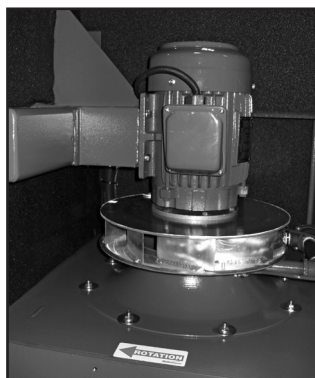


FIGURE 4

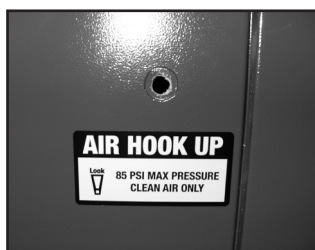


FIGURE 5

### Electrical Hook Up

To operate your new VentBoss Series 300 collector, you will simply need to place it in position and connect your 460 Volt, 3 phase power supply to the provided Electrical Disconnect shown (Figure 3).

Electrical connections should only be done by a licensed electrician and in accordance with NEC and all applicable local codes.

**IMPORTANT:** when the motor is started for the first time, it is essential that the direction of the blower wheel is checked. (Figure 4) When looking down through the outlet grille on the top of the unit, the blower wheel must be rotating in a clockwise direction, also shown by a sticker adjacent to the blower wheel. If it is running in reverse, air will still be drawn through, but at a fraction of the designed volume, and will produce excessive noise and potentially vibration. To correct this reverse rotation of the blower wheel, swap the terminal attachment position on 2 of the 3 phase wires connected to the Disconnect.

Amperage requirements of all models are found in the Equipment Specifications Sheets.

### Compressed Air Hook-Up

**IMPORTANT!** The VentBoss unit needs a clean, oil-free, dry compressed air source, 85 PSI MAXIMUM.

Many problems can be traced back to the presence of oil or water in the compressed air system. If contamination is present, both the filter cartridges and pulse cleaning system will be damaged.

An appropriately sized quick fit air-line connector will need to be threaded into the provided 1/2" NPT adapter. A permanent line can be directly connected to the accumulator tank or a shop air hose can be used when pulse cleaning the filters. (Figure 5)

# SECTION 500 INSTALLATION

## Wall Bracket Installation (Figure 6)

1. Attach wall mount hanger **B** to wall in four places using concrete anchors **I** and 3/8-16 UNC - 1 hex bolts **H**.
2. Attach cabinet hanging bracket **A** to cabinet in two places using 1/2-20 UNF - 1 hex bolts **E**.
3. Attach bottom cabinet hanging bracket **C** to cabinet in four places using 3/8-16 UNC - 1.5 hex head tapping screws **D**.
4. Place cabinet on wall mount and anchor bottom two holes on cabinet hanging bracket **C** to wall using concrete anchors **I** and 3/8-16 UNC - 1 hex bolts **H**.
5. Use 3/8 washers **F** and 3/8-16 UNC - 0.75 hex bolts **G** to secure cabinet bracket to wall mount hanger.

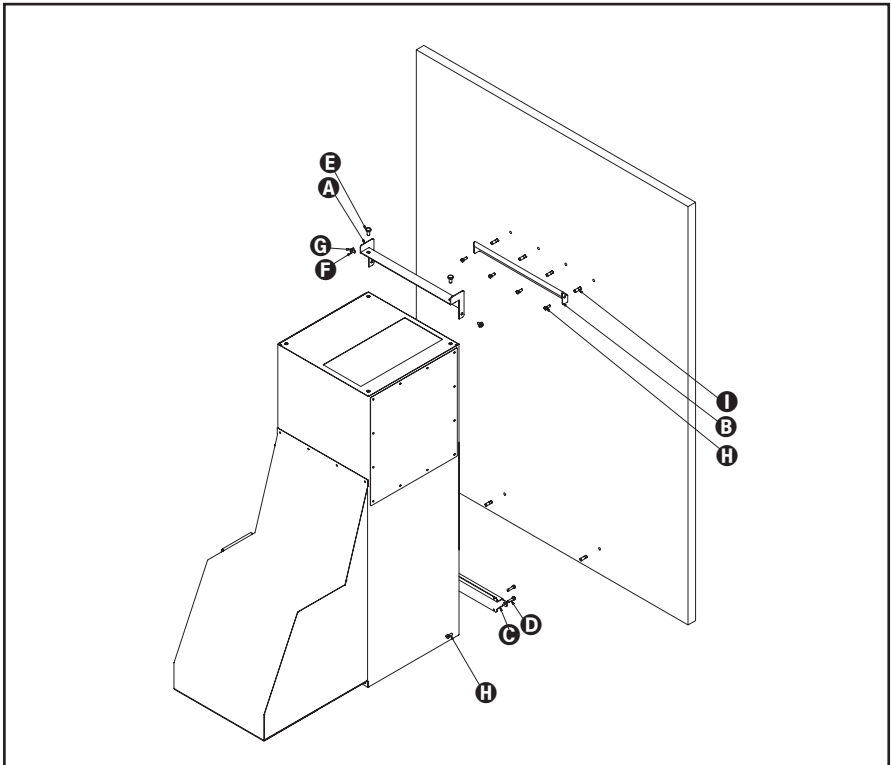


FIGURE 6

## SECTION 600 OPERATION



FIGURE 7



### Pulsing the VentBoss Series 300 Collector

#### (Cleaning the Cartridge Filter)

VentBoss Series 300 Collectors come equipped with a Manual Pulsing System located on the front or right side of the collector. To operate, compressed air must be hooked up to the air inlet. (See Compressed Air Hook-Up Section 500)

After each days use or when the filter differential pressure has built up due to accumulated particulate, press the solenoid plunger (Figure 7) 5-15 times to back-flush the filter cartridge, leaving sufficient time for the air tank to recharge between each press. This cleaning process will loosen the collected particulate from the cleaning cartridge and will be collected in the tray below. Best results will be achieved when the motor is turned off for this process.

### Fume Arm Adjustment (for models with Fume Arms)

The Multi-Positional Fume Arm comes factory adjusted and balanced for maximum ease of mobility.

Position the Fume Arm by pushing or pulling the hood section over the welding area as shown in the photo below. Place the fume hood above and slightly in front of the welding area. This will keep smoke and fumes away from the operator. Adjust the Fume Arm hood to maximize smoke capture. (Figure 8)

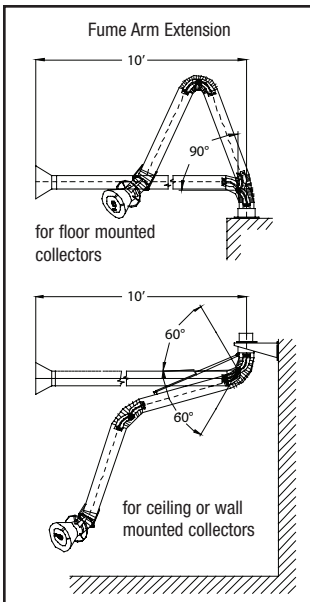
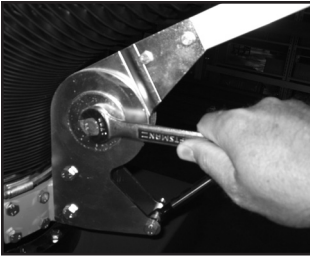


FIGURE 8

SECTION 600  
**OPERATION** (continued)

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**FIGURE 9**

The Fume Arms have two adjustment points that can be changed at any time to give the arm greater flexibility.

Friction disks, located at the base of the arm and at the first hinge point, can be tightened or loosened with a 7/8" wrench. (Figure 9) Simply tighten the nut on the friction disk to make the joint stiffer or loosen to give the joint freer, less restricted action. Be careful not to over tighten the disk as this could cause permanent injury to the arm.



**FIGURE 10**

Some fume arms come equipped with a shock or strut. The shock is not adjustable. (Figure 10)

For more information, see **Appendix A: Fume Arm Installation, Operation & Maintenance.**



## SECTION 700 MAINTENANCE



FIGURE 11

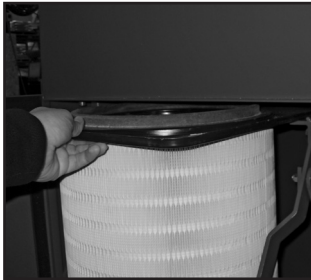


FIGURE 12



FIGURE 13

### Replacing the Filter Cartridge

The Nanofiber MERV15 cartridge filter can be pulse cleaned multiple times before it needs to be replaced. Prior to making a decision to replace the filter, first follow the procedures of “Pulsing the VentBoss Series 300 Collector” - Section 600. The cartridge can also be taken out and manually cleaned with compressed air. When performing these cleaning operations no longer reduces the differential pressure (restriction to airflow), which in turn will reduce the effectiveness of the unit, it is time to change the cartridge filter with a new replacement filter.

The RoboVent Pro-Series uses the SnapLock Front Load System which is a specially designed lift mechanism and a front load track that locks the cartridge filter in place with a single action lever.

To Replace the filter cartridge, open the filter access door and pull up on the two SnapLock levers, (Figure 11) releasing the filter cartridge. Now the filter can be removed. (Figure 12) Reload the new Cartridge Filter into the Filter Cabinet. Ensure filters are aligned correctly in the SnapLock rails, to give an air-tight seal when the gasket is compressed. Engage the SnapLock by pushing down on the SnapLock levers to raise the filters into place. Close and lock the cabinet door.

Replacement filters may be ordered by calling VentBoss Product Group at 1-855-558-VENT.

### Replacing the Metal Baffle Filters

VentBoss Series 300 collectors come equipped with three internal baffle and metal mesh filters located in the spark arresstance plenum. To access the baffle and metal mesh filters release the two latches located at the top and bottom of the spark arresstance door. Pull each filter straight out. (Figure 13).

Both spark arresstance baffles should be removed and cleaned on a regular basis (check every two weeks). If particulate builds up on these baffles the risk of fire in

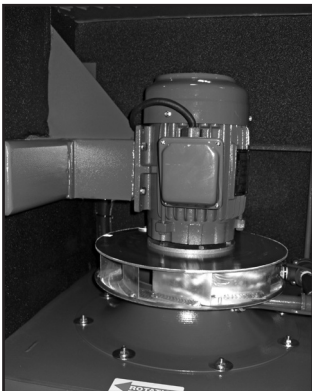


**FIGURE 14**

the system is greatly increased. Typically, these baffles should be removed and cleaned with a hot detergent solution every month. Filters that are bent or deformed beyond repair should be replaced. See Equipment Specifications Sheets for ordering proper replacements.

**CAUTION!** DO NOT replace these baffle filters with anything other than what was originally installed in your unit. Failure to do so will greatly increase the risk of fire.

Placement of the first layer baffle filter is extremely important as the baffles should run vertical with cup side facing the direction the air is flowing from. Failure to place the baffle as shown will increase the risk of fire.



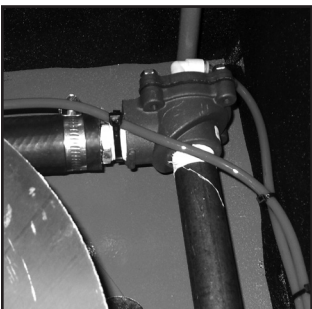
**FIGURE 15**

### **Particulate Removal (Cleaning)**

The dust containment area is located immediately below the cartridge filter and can be accessed through the filter door. Cleaning frequency of the dust bin will vary depending on the welding situation and use. Periodically check the bin for particulate. When 2-3 inches of dust forms at the bottom of the bin remove with a vacuum or brush and pan. (Figure 14)

### **Blower Maintenance**

The motor and blower in your VentBoss Series 300 unit will require very little attention, although it is important to make sure it is kept clean. If your motor is fitted with grease nipples, they must be lubricated every six months. (Figure 15) Installation of a new blower wheel requires a certified VentBoss Technician to balance the wheel and motor. Contact 1.855.558.VENT.



**FIGURE 16**

### **Solenoid Valve Maintenance**

The Pulse Solenoid is located in the rear of the Motor Plenum. (Figure 16) Under normal conditions, the pulse valve will last for the life of the collector. Clean, dry compressed air, at 85 PSI, will help towards a long, maintenance free life of the solenoid. (See Specifications Sheet for replacement information)

## SECTION 800

# TROUBLESHOOTING

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**The VentBoss Series 300 Collector is making excessive noise. Check the following:**

1. Make sure the blower wheel is not hitting against the bottom filter plate.
2. Check that all motor bolts are securely tightened.
3. Make sure motor bearings are good. (Amperage rating will be higher than normal.)
4. Blower wheel could be out of balance. If the blower wheel has gone out of balance, there will be excessive vibration. In this case, please contact the VentBoss Technical Department at 1.855.558.VENT.

**Manual Pulse Filter Cleaning System is not operating:**

1. Verify that the airline is connected to the air tank.
2. Check air tank pressure. The pulse valve works best when pressurized at 85 PSI maximum.
3. Check diaphragm on solenoid valve. If the correct pressure is supplied to the air tank then a problem may exist with the solenoid diaphragm. See Specifications Sheet to order a new diaphragm kit or complete valve from VentBoss Service Department.

**Little or no suction across intake. Check the following:**

1. Cartridge filter is loaded. Review “Pulsing the VentBoss Series 300 Collector” in Section 600 under OPERATION. With the air hooked up press the Solenoid Plunger 25-30 times with a 3-5 second spacing between each pulse. Make sure the unit is turned off for this process.
2. If using a fume arm make sure the butterfly valve behind the intake hood is not closed. Sometimes this valve will close on it's own, cutting off most of the air supply.

**Cartridge filter loads up but no dust in the dust tray. Check the following:**

1. Check that the Manual Pulsing System is working properly.
2. Check for oil or moisture on the filter media. If oil or moisture exists in the air supply it will transfer to the cartridge.
3. In some cases high oil content is introduced in the welding process causing the oil to vaporize. This will cause the cartridge filters to load up prematurely. Call the VentBoss Service Department at 1.855.558.VENT for more information.

**Fume Arm falls when extended:**

1. Tighten the friction desk located near the swivel base of the arm. Be sure not to over tighten. (See Fume Arm Adjustment in Section 600).
2. Fume Arm may be overextended beyond it's weight limit. Place the arm closer to the portable.



# **APPENDIX A**

## **FUME ARM INSTALLATION, OPERATION & MAINTENANCE**

**General Description & Reservations**

VentBoss Base Mount Fume Arms are meant for capturing the welding dusts and gases as well as fine dusts, straight at the emission source, in order to avoid expanding the impurities in the process room and being inhaled by people. The arms are manufactured in hanging and standing version. The extraction arms can work independently with an e traction fan, or in a group of devices connected to the main discharging ductwork with a central fan.

**Producer Reservations:**

- A. Producer accepts no liability for any consequences following from the operational use that is in contradiction to the purpose of application.
- B. It is unacceptable to install on the structure of the device any additional elements not belonging to its normal construction or accessory set.
- C. Any structural changes or modification of the unit, made by User on one's own, are not permitted.
- D. Protect the flexible elements as well as the pipes of the suction duct from mechanical damage.
- E. Prior to installing check the load capacity of the wall or other building structure where the device shall be mounted.
- F. The devices cannot be applied for conveying the air containing aggressive contaminants.

**Structure & Function**

VentBoss extraction arms are constructed of subsequent assemblies presented in Diagram 1 (See Appendix A):

- Swivel
- Two pipe segments ("I" and "II") connected together with frictional joints
- Gas springs – to balance the segment weights
- Shut-off damper
- Suction hood with wire mesh protecting the inlet from getting in the burning rests and chippings.

The swivel guarantees a full rotation of the whole appliance around its vertical axis and therefore ensures an easy device positioning in the requested point within the workspace. The swivel and the pipe segments integrated together with hose sections (flexible connectors) along with the attached hood – are forming a ventilation duct altogether, serving for extraction the dust laden air. This arm configuration can be changed within the work range of the given type of the extraction arm. Additionally, the intake air volume can be adjusted by means of the shut-off damper (installed in the pipe segment "I"). Adequately adjusted frictional joints in co-function with the gas springs, provide comfort of maneuvering with the extraction arm.

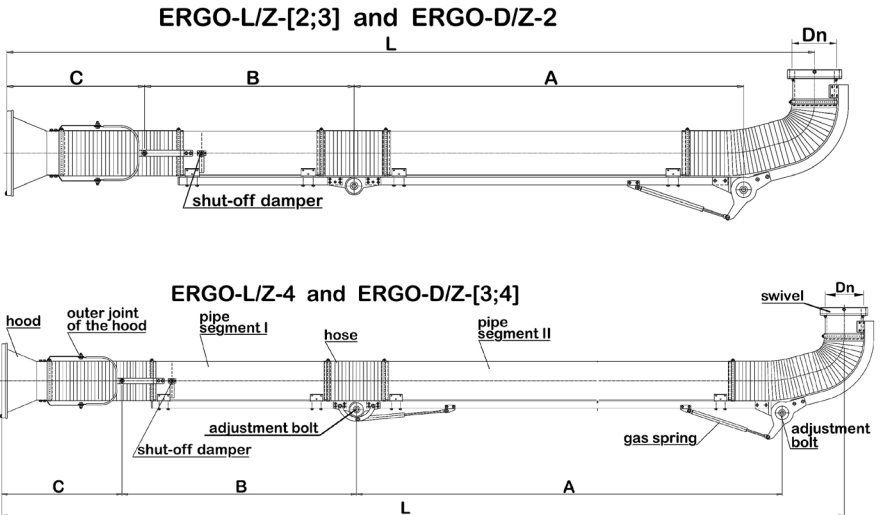
# APPENDIX A: INSTALLATION, OPERATION & MAINTENANCE (continued)

The suction hood can be equipped with a halogen spotlight to light up the workspace. In order to install the extraction arm on the wall or column use a wall bracket. It can also be suspended at the end of the RO-type extension arm.

## Technical Specifications

| Type       | Dimensions |          |          |          |          | Weight |
|------------|------------|----------|----------|----------|----------|--------|
|            | Dn {inch}  | L {inch} | A {inch} | B {inch} | C {inch} |        |
| ERGO-L/Z-2 | X          | 90,80    | 35,71    | 22,91    | X        | 37,4   |
| ERGO-L/Z-3 | X          | 90,80    | 35,71    | 22,91    | X        | 37,4   |
| ERGO-L/Z-4 | X          | 90,80    | 35,71    | 22,91    | X        | 37,4   |
| ERGO-D/Z-2 | X          | 90,80    | 35,71    | 22,91    | X        | 37,4   |
| ERGO-D/Z-3 | X          | 90,80    | 35,71    | 22,91    | X        | 37,4   |
| ERGO-D/Z-4 | X          | 90,80    | 35,71    | 22,91    | X        | 37,4   |

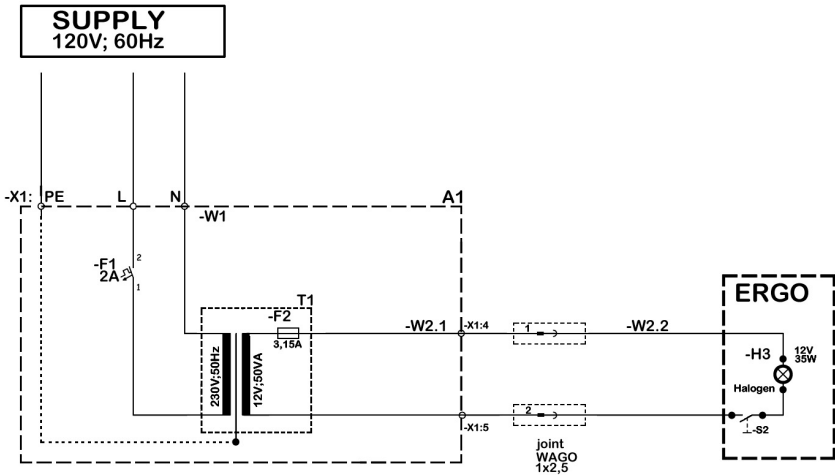
(Refer to diagrams below for DN, L, A, B, & C



VentBoss extraction arms in versions ERGO-L/Z and ERGO-L/Z are equipped with hoods with halogen spot-lights. See next page for connection diagram.

# APPENDIX A: INSTALLATION, OPERATION & MAINTENANCE (continued)

Connection diagram for hoods with halogen spot-lights:

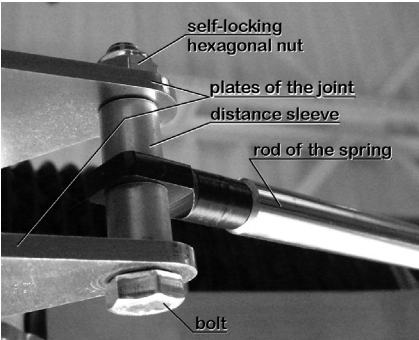


## Fume Arm Assembly

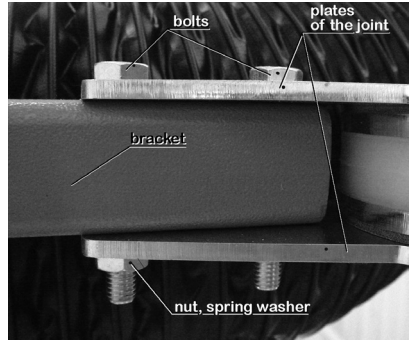
1. Take out the VentBoss extraction arm from the package and put it stably on an even surface.
2. Pull the arm segments apart until you obtain the 45° angle.
3. Screw up the swivel support to the plate of the lower joint – see detail “B” (Pic. 2)
4. Fold in the loose fabric edge, at the end of the hose – then sleeve the hose onto the swivel ferrule and secure it with a hose clamp.
5. Fasten the termination of the gas spring with a screw to the plate of the lower joint – see detail “A” (Pic. 1).
6. Connect the upper segment II with the lower segment I using a hose – following the point 4.
7. Screw up the outer joint to the hood – see detail “C” (Pic. 3).
8. Using a hose, connect the lower segment I with the hood – following the point 4.
9. The VentBoss extraction arm is ready to be mounted on a wall bracket or to a filtering device.



**APPENDIX A:**  
**INSTALLATION, OPERATION & MAINTENANCE** (continued)

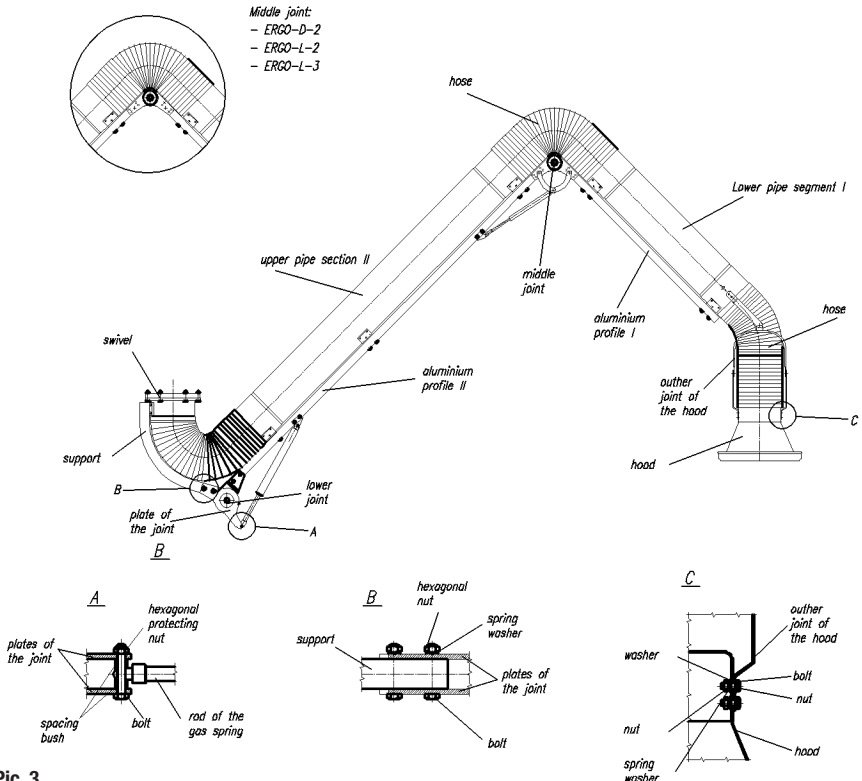


**Pic. 1**



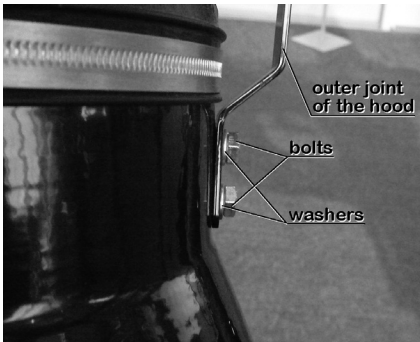
**Pic. 2**

In case when the extraction arm is installed on a wall bracket, it is important to carry out levelling of the bracket surface while mounting it on a wall. If the bracket is not levelled, the extraction arm is likely not to keep the requested by User work position and tend to fall into one position only (Pic. 4).

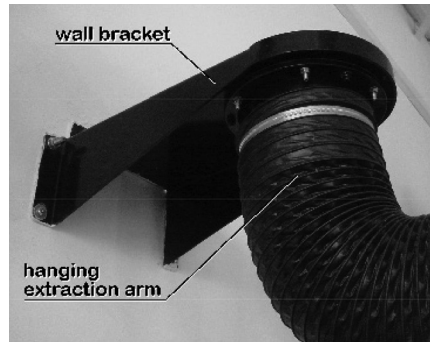


**Pic. 3**

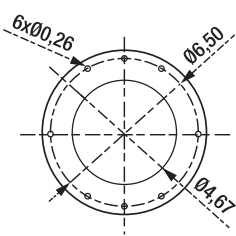
APPENDIX A:  
**INSTALLATION, OPERATION & MAINTENANCE** (continued)



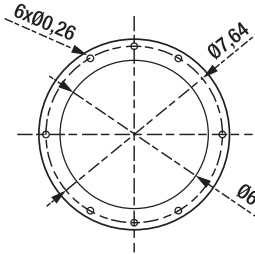
Pic. 3



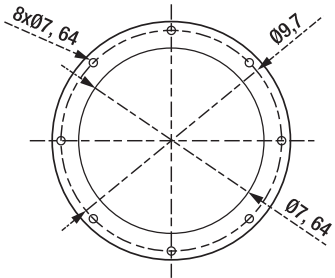
Pic. 4



For ERGO-L/Z  
 For ERGO-D/Z



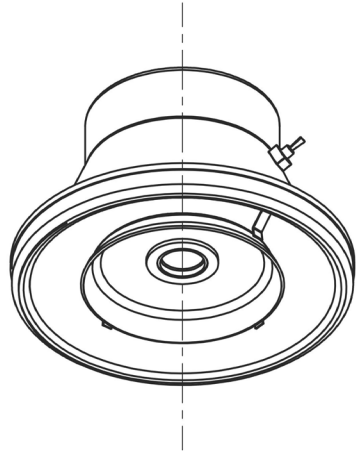
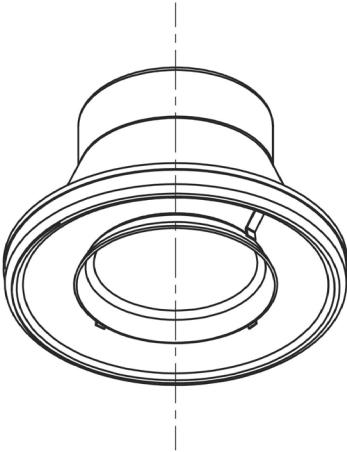
(Dn 06,3')  
 (Dn 08')



– 6 bolts M6x40 – 8,8  
 – 8 bolts M8x40 – 8,8

VentBoss Fume extraction arms are delivered in cardboard packages in a partly assembled state. Before the extraction arm is installed at the work place – it is important to bring the device into completely assembled state (according to the enclosed instruction). The extraction arms can be mounted on a wall bracket (delivery on separate order). The diameter and placement of the mounting holes in the bracket and in the arm swivel are the same.

*It is inadmissible to install the VentBoss extraction arm directly to the ventilation installation, as it is usually not constructed to carry such charges during the operational use of the device.*

**Hood with light**

- Prior to work, start the extraction fan and make sure the ventilation discharge ductwork is functioning.
- Set the hood into suitable position: not more than 30 cm from the welding arc, and not less than 20 cm – as the welding chippings could effect the hood and additionally the hood suction could interrupt the protection gas shield (CO<sub>2</sub>, argon). It is important that the hood is effectively capturing the fume and does not cause any obstacle to User.
- Using the shut-off damper lever, adjust the intake air volume to eliminate the dust / fume most efficiently.
- The position of the hood and the damper lever can be changed many times during the work, so User can adjust them most appropriately, to the current needs.
- After the work is completed – the extraction arm can be left in the ultimate position (operational state), or if it causes obstacle – set the arm in the home position.
- Stop the extraction fan, if the device works in a ventilation system – close the appropriate shut-off damper.

# INSTALLATION, OPERATION & MAINTENANCE (continued)

## Using Your VentBoss Fume Arm

The construction guarantees a safe and reliable function without continuous servicing and special handling. The adjustment of the ERGO extraction arm consists mainly in corrections within the frictional joints. The frictional brakes are placed in each joint of the device and their function is to give the balance and self-supporting properties of the whole extraction arm and ensure an easy manoeuvring during the operation.

The adjustment of the frictional brakes is carried out by increasing or reducing the tension of the nuts upon the frictional elements.

The brake adjustment in the following joints ought to be executed in such a way that it guarantees the stability and self-supporting features of the extraction arm (which is important to keep the stable arm position), whereas on the other hand this cannot cause any excessive resistance while User is changing the arm position. Having completed the adjustment, tighten up the counter-nut. The placement of the adjustment nuts is illustrated in the “VentBoss Extraction Arms – Dimensional Drawings” (Diagram 1—Appendix A).

|    | Type   | Possible Reason & Corrective Action  |
|----|--|--|
| 1. | The extraction arm is falling.   | -Improperly adjusted frictional brake.<br>-Increase the tension upon frictional disks of the brake in the joint by tightening the adjustment nuts.   |
| 2. | The extraction arm is automatically setting always in the same position. | -The rotation axis of the arm is not positioned vertically.<br>-Carry out the positioning of the mounting flange of the ERGO extraction arm to set the rotation axis vertically.                       |
| 3. | Drop in the air suction rate along with the increased noise level.       | -Improper impeller rotation sense of the extraction fan.<br>-Change the phase connection sequence (only 3-phase motor). If the mesh holes of the inlet net are clogged, clean them using a wire brush. |

## Safety

The VentBoss extraction arms will not cause any risk provided that they are firmly and correctly mounted to the wall or another structural element of the building.

**CAUTION!** Unsure installing could cause uncontrolled detachment of the device and be serious risk to personnel / people in the vicinity.

Having completed the work, leave the extraction arm in the ultimate operational position, in case when it constitutes obstacle to personnel/User, set into the home position.

Prior to installing check the load carrying capacity of the building structure.

**Maintenance & Repair**

In order to obtain appropriate capture efficiency of the suction hood, clean its surface and the inlet wire-mesh net from the deposited dusts and impurities. In case of welding dusts, additionally – sprinkle the hood with an anti-spattering liquid to avoid adhering the welding chippings.

In case when the extraction arm is losing its self-supporting properties – undertake the adjustment of its frictional brakes (to regain self-locking function of the joints).

Lubricate the swivel every 3 months using solid grease (lubrication nipple is located in the swivel flange).

After 1 operational year, submit the device to a technical revision and repair or replace the faulty element.

Clean the internal surfaces of the extraction conduits (segment pipes) from the deposited impurities. Revision frequency depends on the operational intensity. It is recommended to examine the pollution state of the discharge conduits once in three months.

**Transportation & Storage**

VentBoss extraction arms have to be stored and transported in partly disassembled state and in special packages. The devices ought to be stored in dry and well ventilated rooms. During the transport / reloading protect the device from scratching, indents and pay attention that the markings and labels would not get detached/obliterated.

**Warranty**

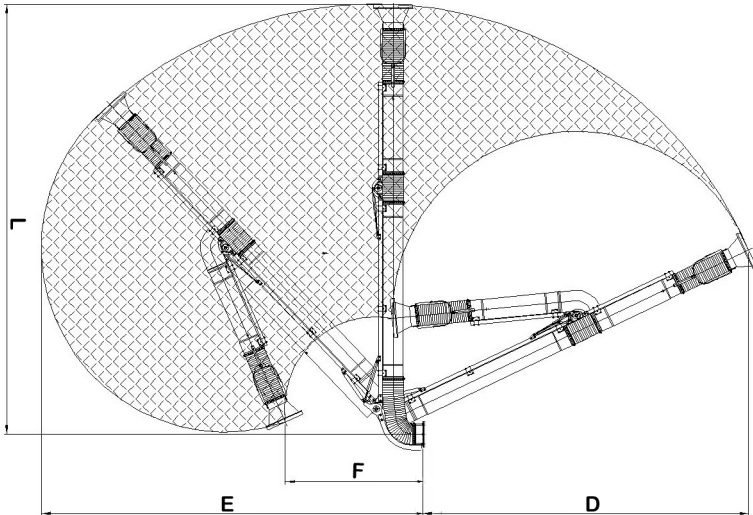
The period of warranty for the purchased device is indicated in the “Card of Warranty”. The warranty does not comprise:

- defects and damages arising during the incorrect use and in application that is inconsistent with the present manual
- mechanical and electrical damages being caused during improper storage and transport or incorrect maintenance
- structural modifications, or changes / adaptations introduced by User on one’s own
- inefficiency following from the normal operational exhaustion

Infringement of the section 3 “**Reservations of producer**” of the **Owner’s Manual** and especially modifications undertaken by User on one’s own shall cause the loss of warranty validity.

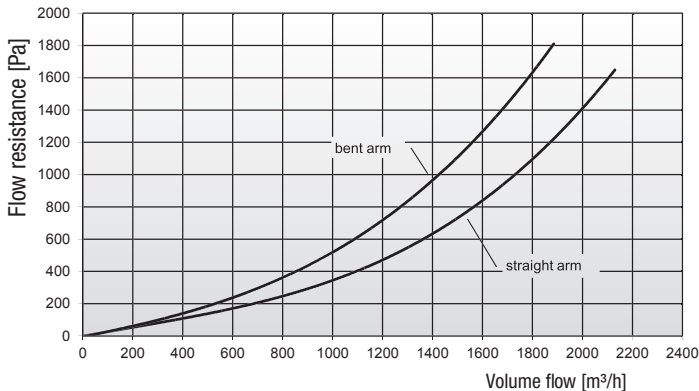
# APPENDIX A: INSTALLATION, OPERATION & MAINTENANCE (continued)

## Range of Fume Extraction Arm:



| Type       | D {mm} | E {mm} | F {mm} | L {mm} |
|------------|--------|--------|--------|--------|
| ERGO-L/Z-2 | 65,51  | 79,72  | 28,27  | 90,79  |
| ERGO-L/Z-3 | 87,56  | 108,07 | 38,74  | 122,28 |
| ERGO-L/Z-4 | 106,06 | 131,81 | 47,52  | 148,66 |
| ERGO-D/Z-2 | 64,96  | 79,02  | 27,91  | 90,00  |
| ERGO-D/Z-3 | 88,66  | 109,49 | 39,25  | 123,86 |
| ERGO-D/Z-4 | 105,47 |        | 47,24  | 147,87 |

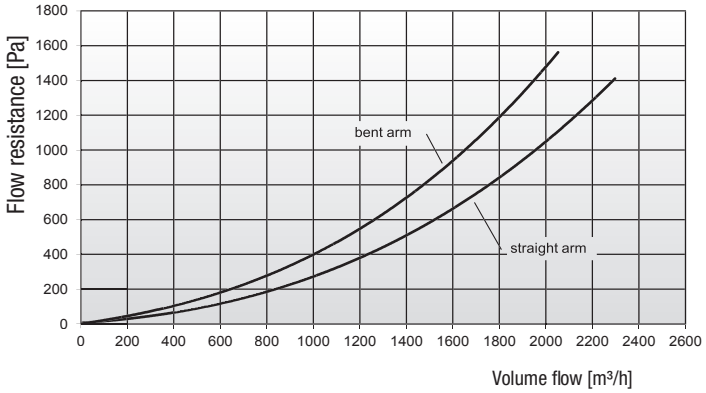
### ERGO-L/Z



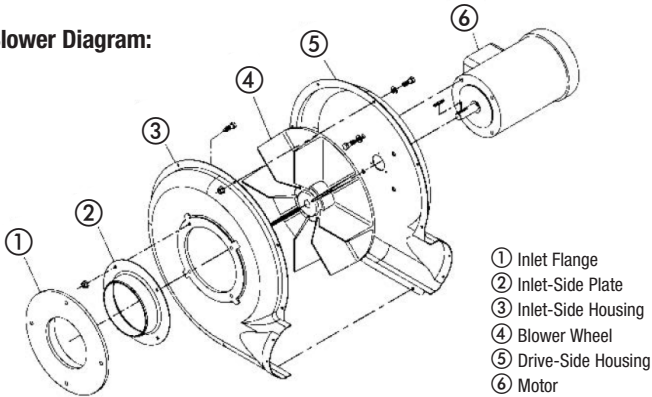
**APPENDIX A:**  
**INSTALLATION, OPERATION & MAINTENANCE** (continued)

**Range of Fume Extraction Arm:**

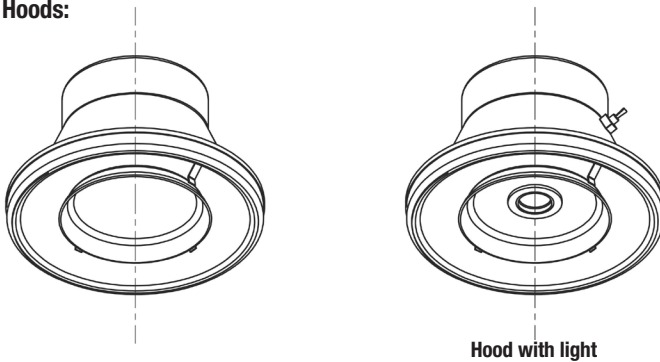
**ERGO-D/Z**



**Blower Diagram:**



**Bell Mouth Hoods:**





**VENTBOSS**<sup>®</sup>  
by **RoboVent**<sup>®</sup>

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