

# MONOXIVENT®

Source Capture Systems

## Operation and Maintenance Manual

### 15000 TT Series Tube Type



**MONOXIVENT - SOURCE CAPTURE SYSTEMS**

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## **Enclosures:**

- Structure Drawing
- Performance Curves
- Installation Drawing

## 1. Introduction

The manual is intended for the purchaser and for the future user of the 15000-TT. The purpose is to provide with information within the range of application, installation, start, and the operational use. The start up and use is admissible after getting acquainted with the contents of the User's Manual. With regard to continuity of work carried on improvement of our products, we reserve for ourselves the revision possibility of the draft and technological changes improving their functional features.

## 2. Application

The 15000-TT extraction arms are designed for extraction of dust and welding gas and also other fine dust at the mobile workplaces. Due to special construction and proper balance of the device, the user can maneuver the hood easily and position its inlet in the needed point of the operation field. Additionally it assured the possibility to adjust the angle of the hood-inlet to guarantee the best extraction degree and on the other hand is not limiting the field of view at the workplace and does not bring any obstacle to user's movements. The 15000-TT extraction arms can operate both with single extraction fans and with the main collecting duct, where the other extraction arms can be connected.

## 3. Reservations of Producer

- A.** Producer is not responsible for failures caused during the use that is inconsistent to the purpose of the application.
- B.** It is inadmissible to install on the device structure any additional elements not belonging to its normal construction or accessory.
- C.** Any structural changes or modification on one's own are not permitted.
- D.** Protect the flexible elements, pipes and hose sections from mechanical damage.
- E.** Prior to installing, check the load carrying capacity of the wall or other building structure where the device shall be mounted.

## 4. Technical Data

The technical data for all versions are specified in the enclosures: "*Structure Drawings*", "*Performance Curves*".

## 5. Structure and Function

The 15000-TT extraction arm has been constructed of several assemblies illustrated in the enclosed "Structure Drawing":

- Swivel,
- Joints (connector, hose section, clamps),
- Pipe Segment 1 (with damper, handle, and outer joint for hood maneuver),
- Pipe Segment 2,
- Hood,
- Tension Springs

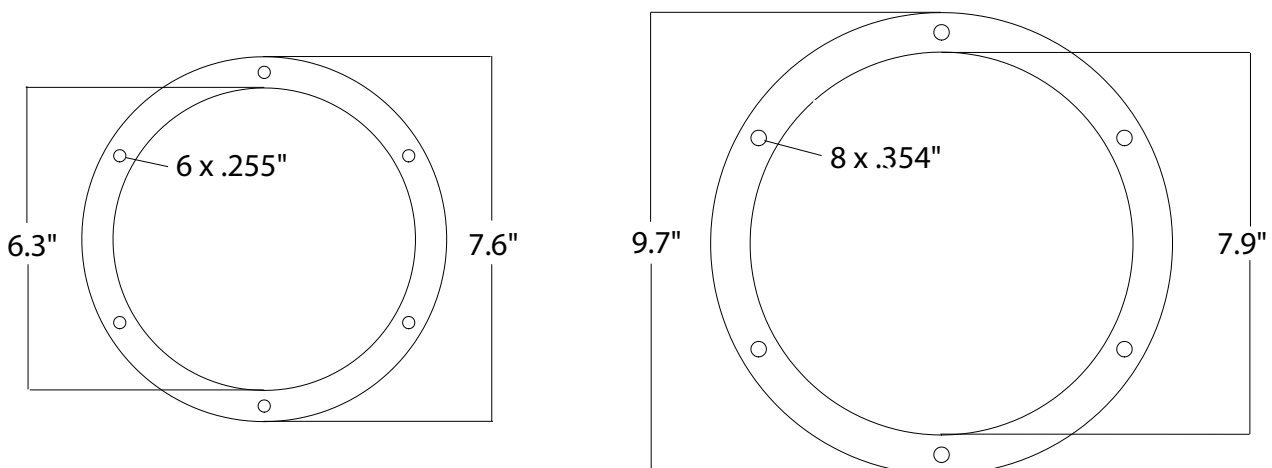
The swivel guarantees the rotation of the whole device by 360 degrees (around its vertical axis) and therefore gives an easy hood handling and positioning in the needed point at the workplace. To the swivel are connected the pipe elements (Pipe segments 1 and 2).

The swivel and the pipe segments integrated together with hose sections (flexible connectors) and with the attached hood are forming a ventilation duct for extraction. This configuration can be changed according to the given type of the extraction arm. Additionally, intake air volume can be adjusted by means of the damper (installed in the pipe segment 1).

## 6. Assembly and Start

The 15000-TT 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 a completely assembled state (according to enclosed instruction).

The extraction arms can be mounted on the wall bracket (delivery on separate order). The diameter and the spacing of holes (for the mounting bolts) of the wall bracket and the swivel are the same. Here are the following dimensions:



The construction of the wall brackets (of the extraction arms) guarantees also the installation possibility of the extraction fan (delivery on separate order). It is inadmissible to install the 15000-TT extraction arm directly to the ventilation system, because it is not adapted to carry such charges and loads during the operational use of the device.

**Start up:**

- Before the work, start the extraction fan or make sure that the extraction system is functioning.
- Set the hood into a suitable position: **Not more than 12"** from the welding arc, and **not less than 8"** - as the welding chippings could affect the hood and also the hood suction could interrupt the gas-coating (CO<sup>2</sup>, argon). It is important that the hood is effectively capturing the fume and does not bring any obstacle to user.
- Adjust the intake air volume with the damper level to control the dust and fume extraction most efficiently and on the other hand not to cause excessive draft.
- The position of the hood and the damper level can be changed many times during the work, so user can adjust them best to the current needs.
- After the work is finished**, the extraction arm can be left in the hitherto position (operational state), or if it brings obstacle, set the arm in the home position.
- Stop the extraction fan (if the device works in a ventilation system, close the appropriate damper).

**7. Use**

The construction guarantees a safe and reliable function without continuous servicing and special handling. The adjustment of the 15000-TT extraction arm consists mainly in the regulation within the frictional brakes. The frictional brakes are placed in each joint of the device - and to give the balance and self-supporting properties of it and an easy maneuver 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. To **increase** the frictional moment, **tighten** up the nuts and in order to **reduce** the tension, **release** the nuts. 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 the arm position is changed

Having completed the adjustment, tighten up the counter-nut. The placement of the adjustment nuts is illustrated in the "*Structure Drawing*" of the extraction arms.

## 8. Trouble Shooting Guide

	Failure	Possible Reason and Preventative Measure
1.	The extraction arm is falling	Improperly adjusted frictional brake; increase the tension upon frictional disks of the brake in the joint by tightening the adjustment nuts.
2.	The extraction arm is automatically setting itself in the same position	The rotation axis of the arm is not positioned vertically; Carry out the positioning of the mounting flange of the arm to set the rotation axis vertically.
3.	Drop in the air suction rate at the increased noise level	Improper impeller rotation sense of the extraction fan; Change the phase connection sequence (3 phase motor)

## 9. Maintenance

The maintenance consists of the following steps executed periodically:

- In order to protect the hood from gluing the welding chippings it is important to spray its inlet systematically with anti-glue fluid.
- In case when the extraction arm is losing its self-supporting properties - undertake the adjustment of the frictional disks
- Lubricate the swivel every 3 months with solid grease (lubrication nipple in the swivel flange.)
- After one year of use submit the device to a technical revision and repair or replace the faulty element.

## 10. Safety

The 15000-TT extraction arms will not bring any risk if they are firmly and correctly mounted to the wall or another building element. Unsure installation could bring an uncontrolled detachment and cause a serious threat to personnel. Having completed the work - leave the extraction arm in the last operational position; in case when it brings obstacle to personnel set it into the home position.

## 11. Storage and Transport

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

## 12. Terms of Warranty

The period of warranty for the purchased device is defined in the "Card of Warranty"

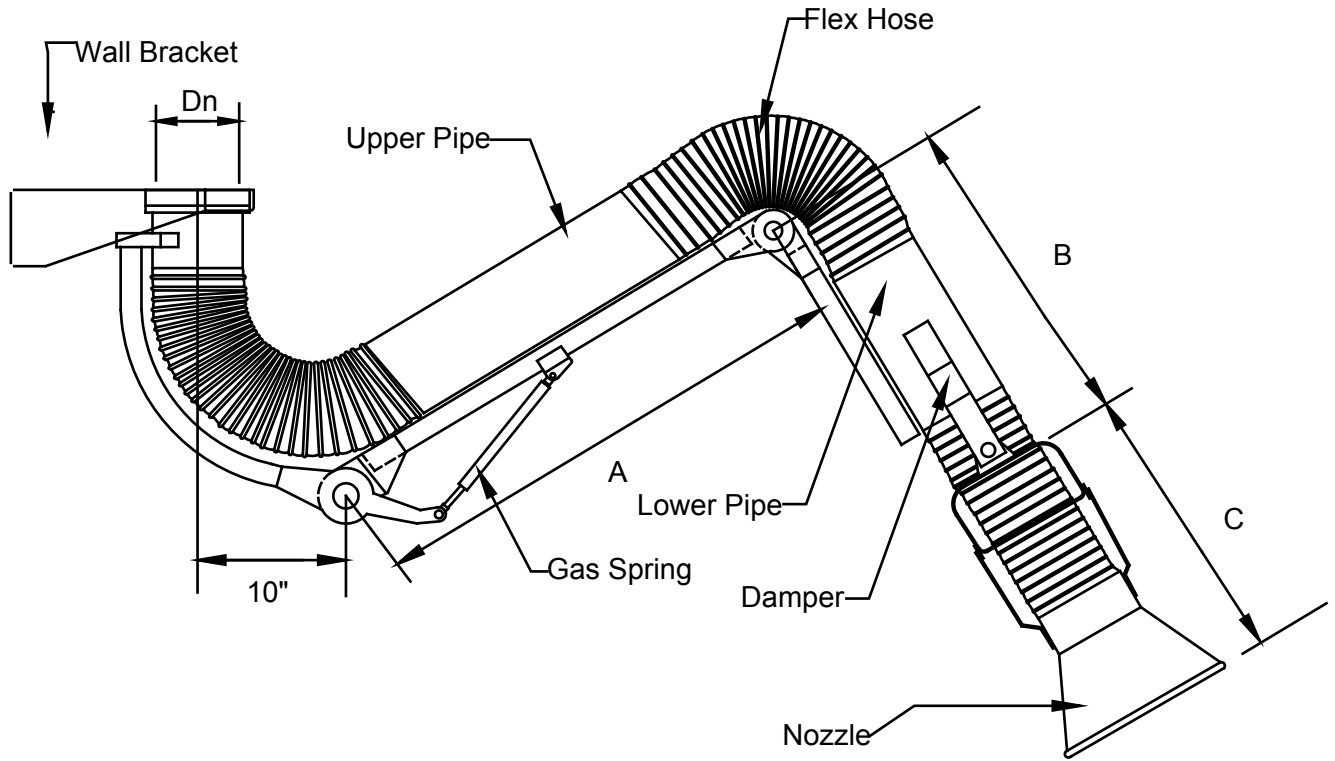
The warranty does not comprise:

- Mechanical damages and dysfunctions caused by User.
- Defects and damages occurring from incorrect use and application.
- Damages being caused during improper storage, transport and maintenance.
- Inefficiency following from the normal operational exhaustion.

Infringement of the section 3 "reservations of producer" of this manual and device modifications undertaken by User one's own and use that is inconsistent to the application shall cause the loss of validity of the warranty.

*Infringement of the section 3 "Reservations of Producer" of this manual and device modifications undertaken by user one's own and use that is inconsistent to the application shall cause the loss of validity of the warranty.*

15000-TT, 7' Model Shown  
Available 4", 5", 6" or 8"  
Standard

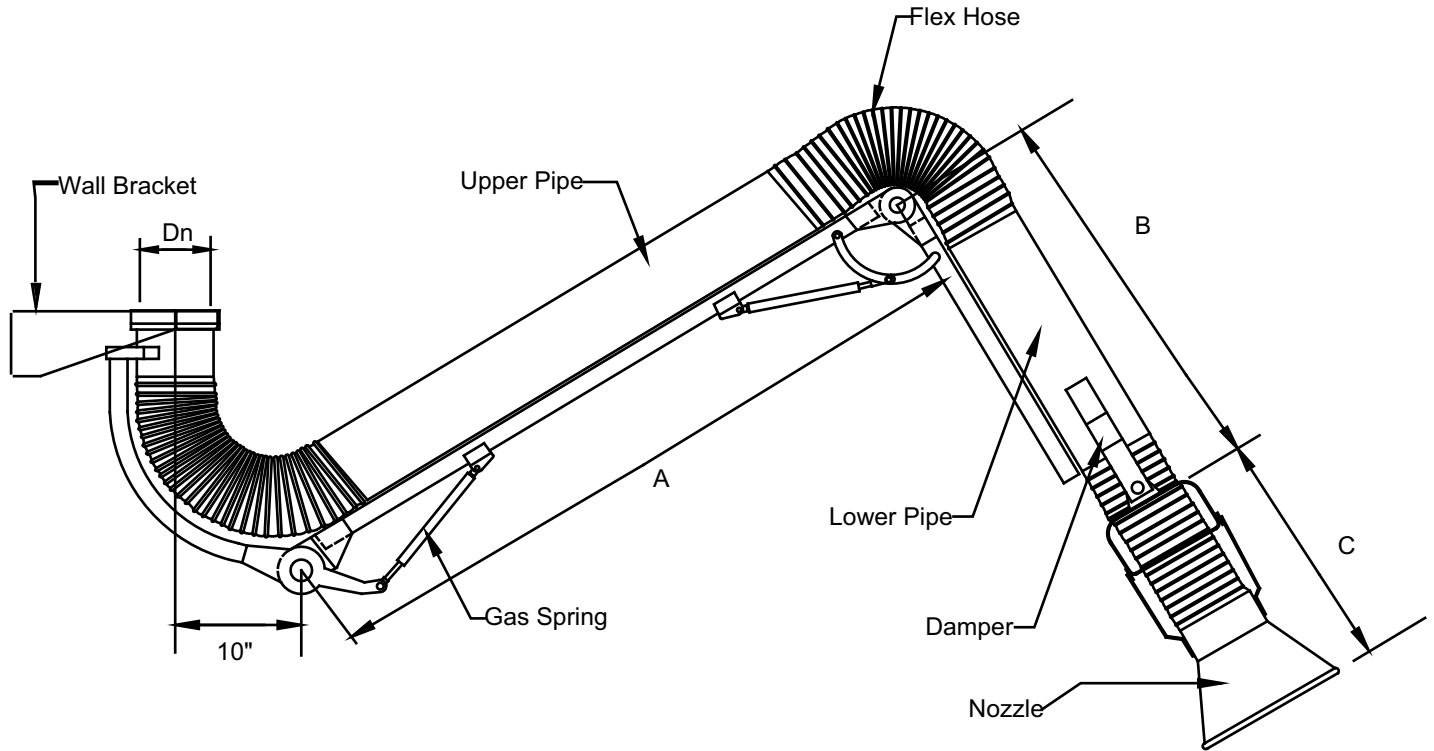


<b>Model</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>Dn</b>	<b>Description</b>	<b>Weights (lbs.)</b>
15074-TT	37.3"	22.8"	20.2"	4"	7' x 4" Tube Type Arm	52
15075-TT	37.3"	22.8"	20.6"	5"	7' x 5" Tube Type Arm	55
15076-TT	37.3"	22.8"	21.0"	6"	7' x 6" Tube Type Arm	55
15078-TT	37.3"	22.8"	21.4"	8"	7' x 8" Tube Type Arm	60

\*Stainless Steel option available, consult factory for pricing

Contact factory for bench-top mount, other configurations

15000-TT, 10' Model Shown  
 Available 4", 5", 6" or 8"  
 Standard



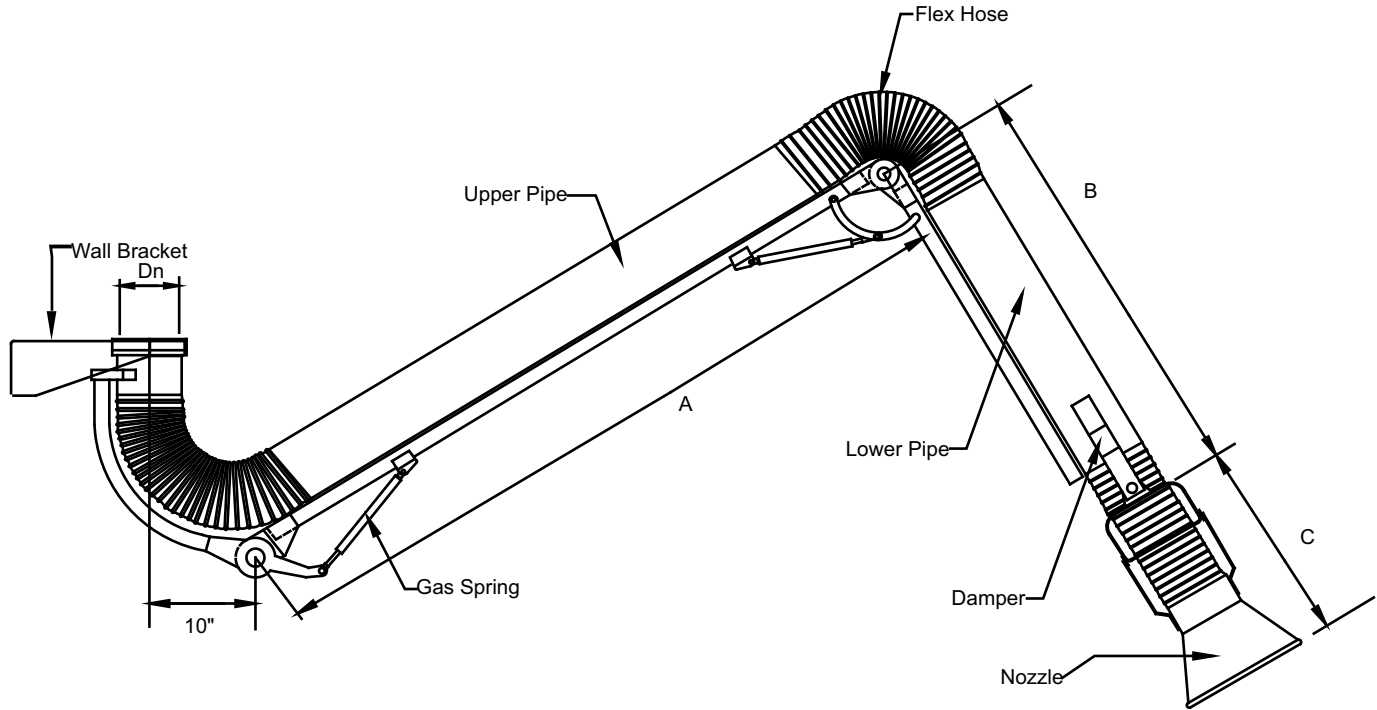
<b>Model</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>Dn</b>	<b>Description</b>	<b>Weights (lbs.)</b>
15104-TT	60.1"	32.3"	20.2"	4"	10' x 4" Tube Type Arm	57
15105-TT	60.1"	32.3"	20.6"	5"	10' x 5" Tube Type Arm	60
15106-TT	60.1"	32.3"	21.0"	6"	10' x 6" Tube Type Arm	60
15108-TT	60.1"	32.3"	21.4"	8"	10' x 8" Tube Type Arm	65

*\*Stainless Steel option available, consult factory for pricing*

*Contact factory for bench-top mount, other configurations*



15000-TT, 13' Model Shown  
Available 4", 5", 6" or 8"  
Standard

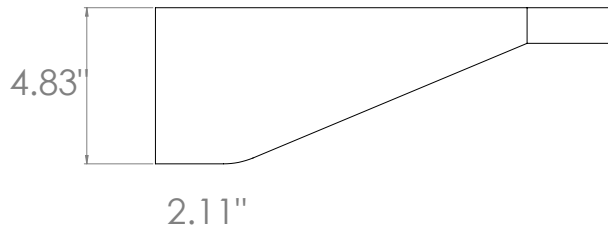
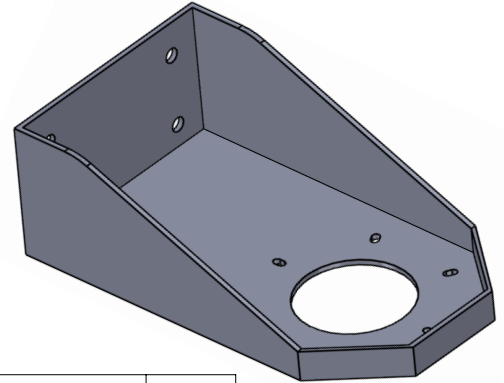
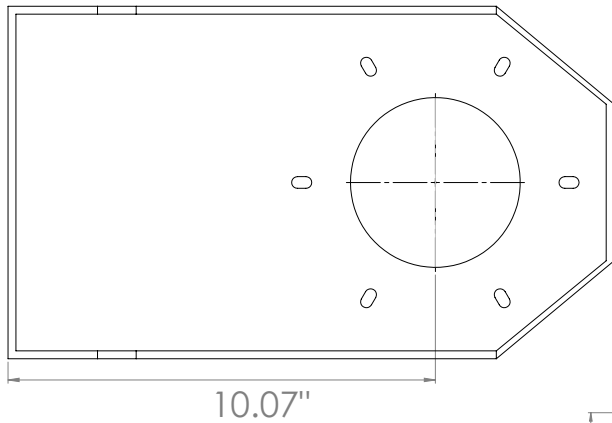


<b>Model</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>Dn</b>	<b>Description</b>	<b>Weights (lbs.)</b>
15134-TT	75.1"	41.3"	20.2"	4"	13' x 4" Tube Type Arm	70
15135-TT	75.1"	41.3"	20.6"	5"	13' x 5" Tube Type Arm	75
15136-TT	75.1"	41.3"	21.0"	6"	13' x 6" Tube Type Arm	80
15138-TT	75.1"	41.3"	21.4"	8"	13' x 8" Tube Type Arm	85

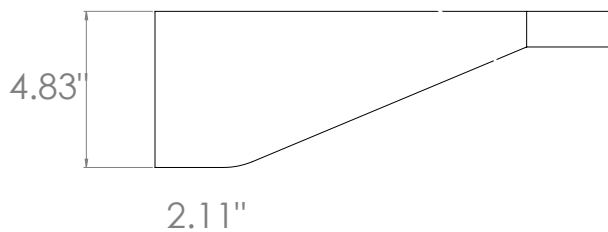
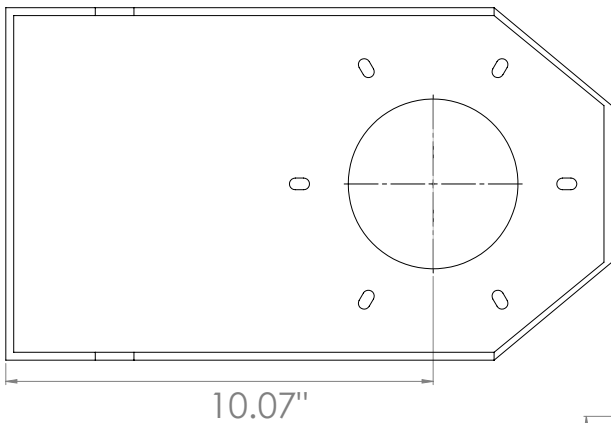
*\*Stainless Steel option available, consult factory for pricing*

*Contact factory for bench-top mount, other configurations*

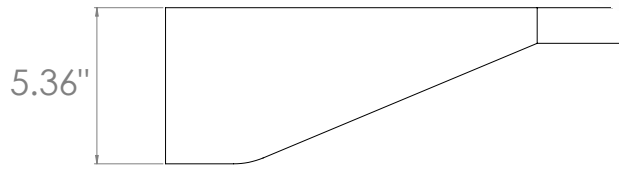
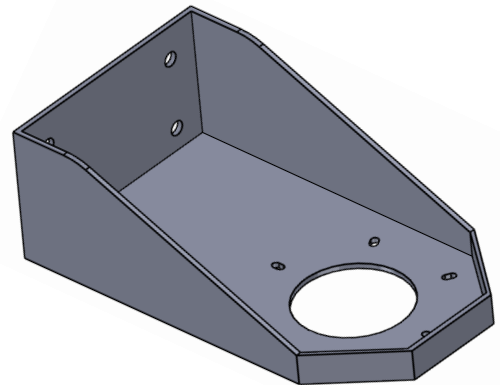
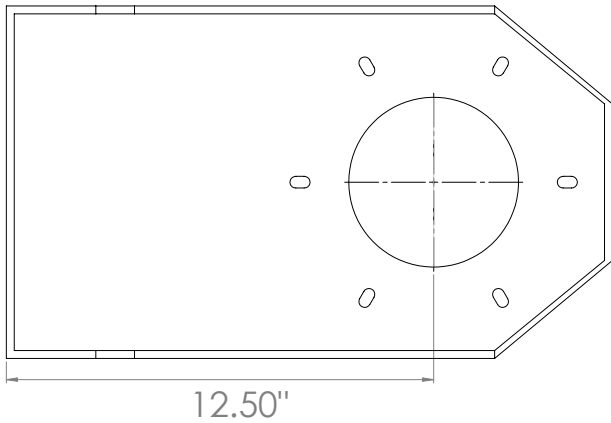
**Series 15000-TT  
4" Tube Type Arm Wall Bracket**



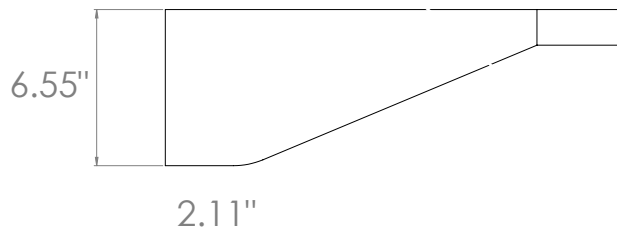
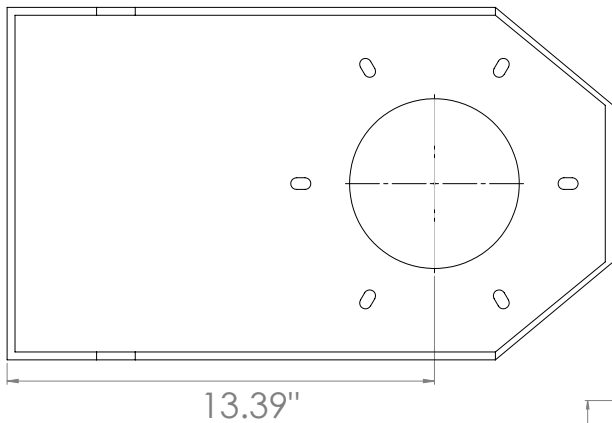
**Series 15000-TT  
5" Tube Type Arm Wall Bracket**

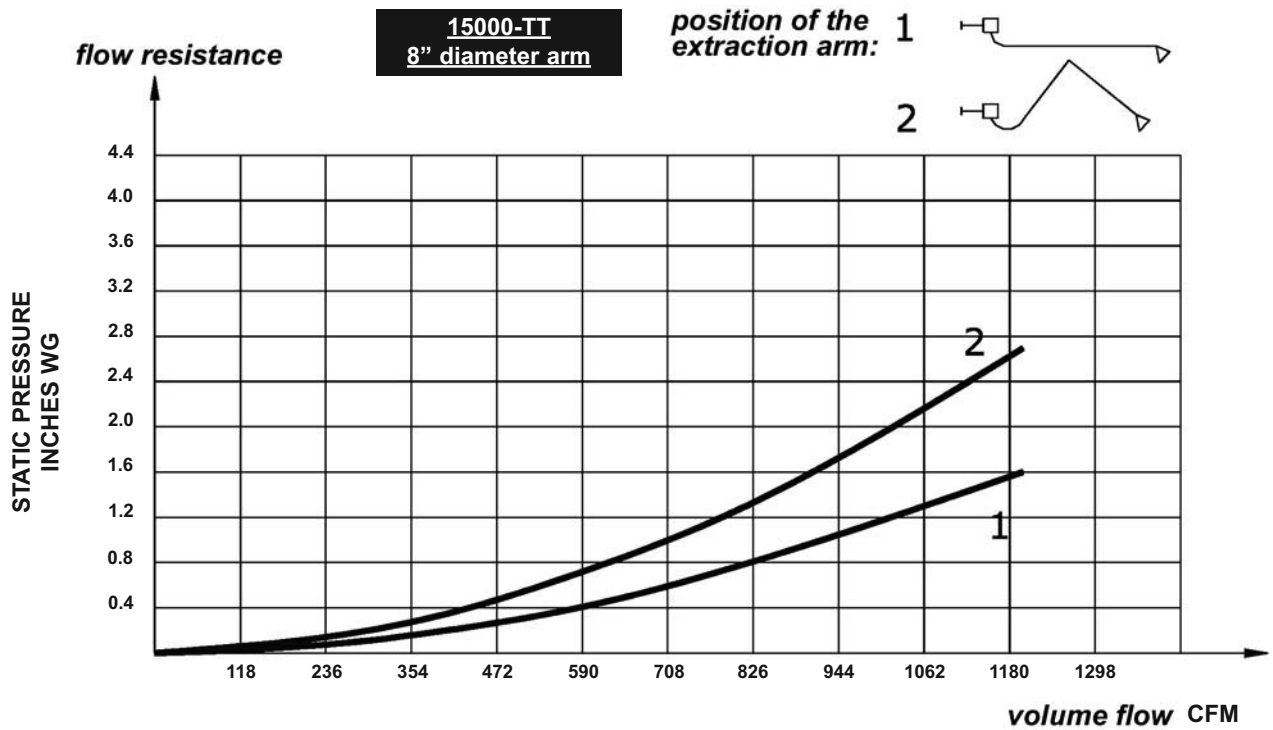
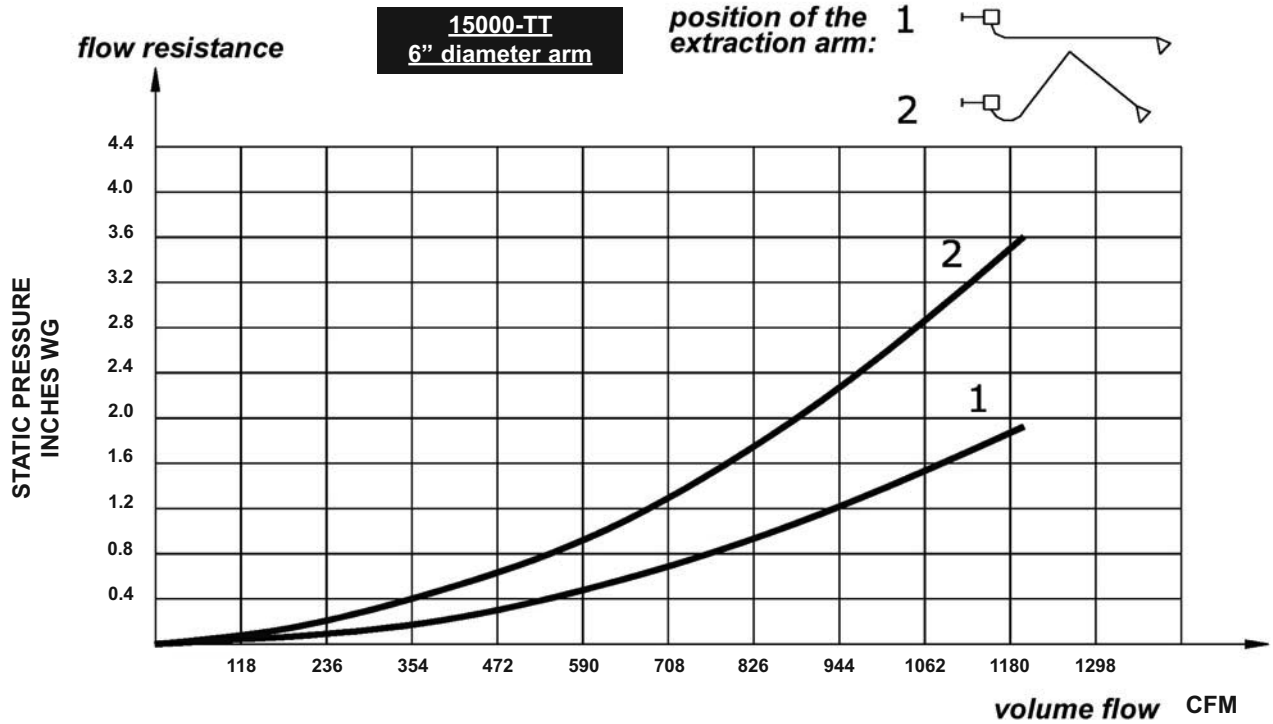


**Series 15000-TT  
6" Tube Type Arm Wall Bracket**



**Series 15000-TT  
8" Tube Type Arm Wall Bracket**



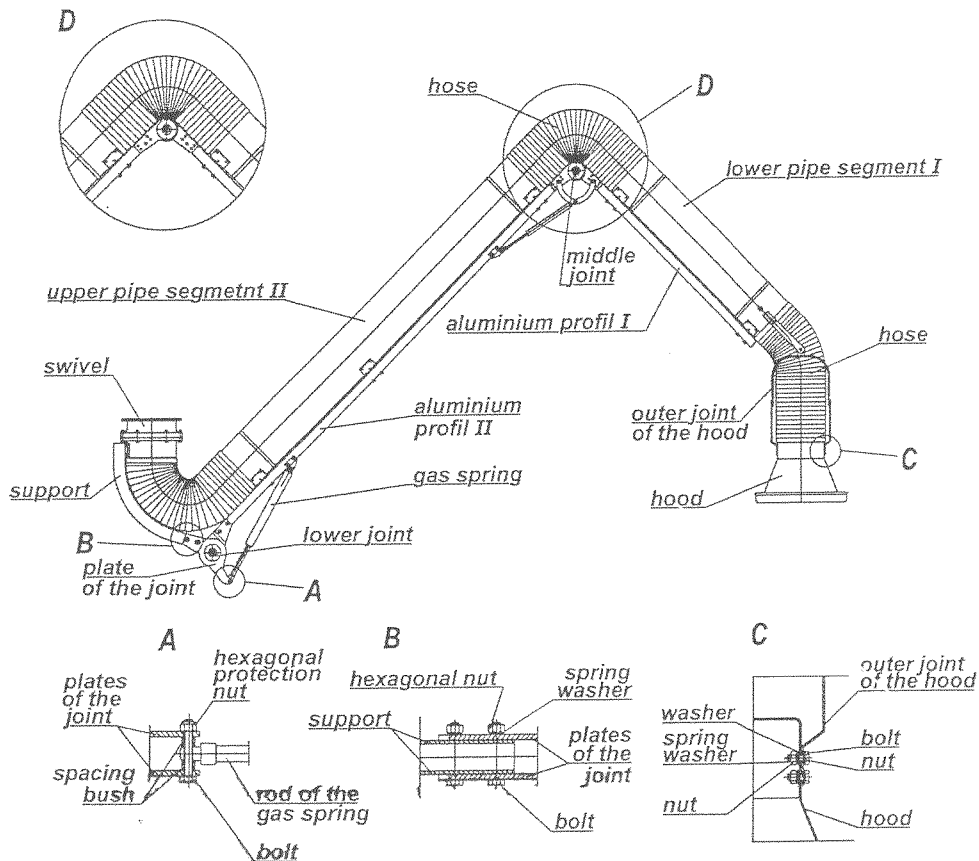


Note, 4" and 5" models available - please consult factory

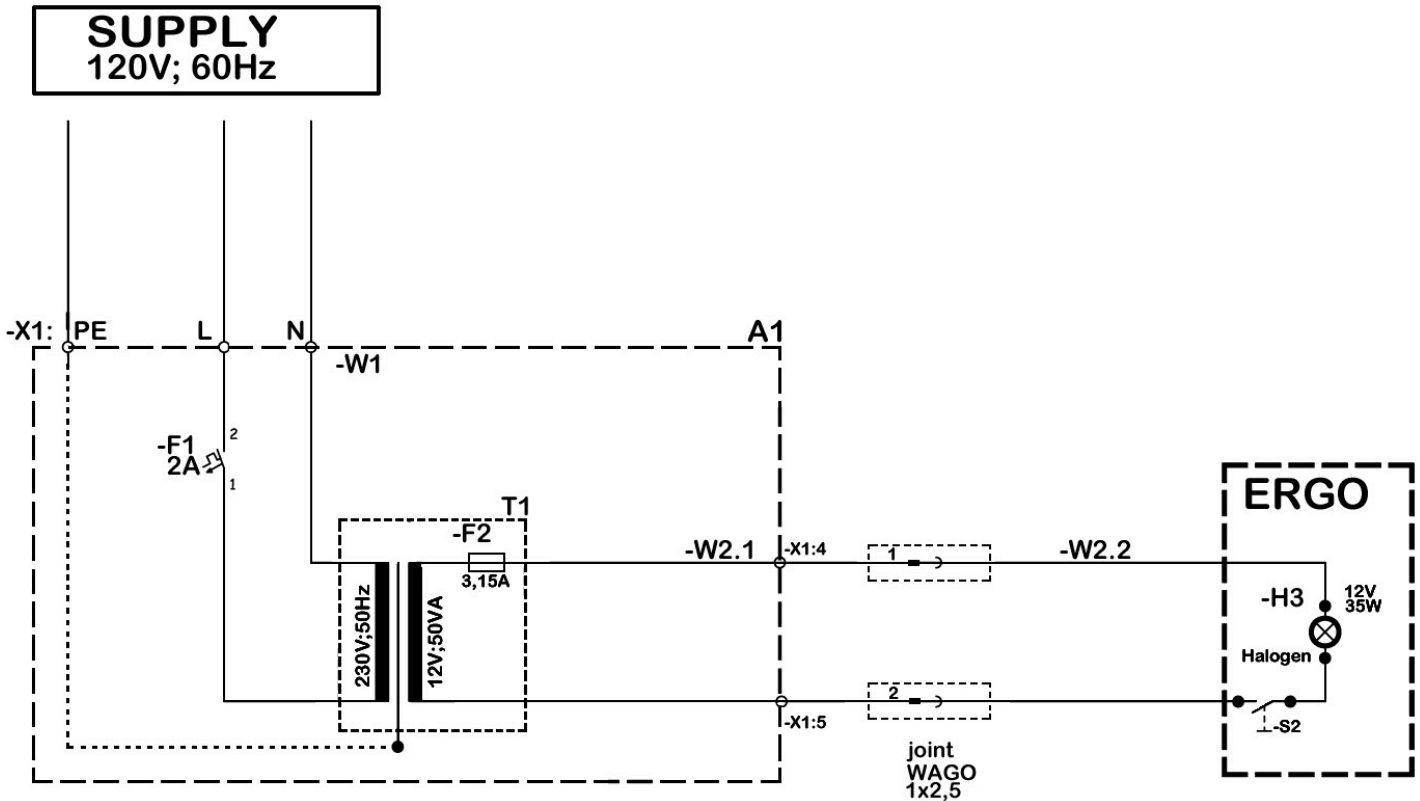
## Installing the Extraction Arm

In order to prepare the 15000-TT extraction arm for installation at the workplace, follow the subsequent steps:

1. Take out the 15000-TT extraction arm from the package and put it stably on an even surface.
2. Pull the arm segments apart to obtain the angle 45 degrees.
3. Screw up the support of the swivel to the plate of the lower joint (see detail "B").
4. Fold the lose fabric edge in, at the end of the hose - then sleeve the hose onto the swivel ferrule and secure it with a hose clamp.
5. Fix the termination of the gas spring (with a screw) to the plate of the lower joint - (see detail "a").
6. Connect the **upper segment II** with the **lower segment I** (following the point 4).
7. Screw up the outer joint to the hood (see detail "c").
8. Connect (using a hose) the lower **segment I** with the hood (following the point 4).
9. The 15000-TT extraction arm is ready to be mounted on the wall bracket or on a filtering device.



**Optional Light Kit Connection Diagram**



**Connection Diagram - 15000-TT**