



Operation & Maintenance Manual

# FUME EXTRACTOR HANGING ARM



READ AND SAVE THESE INSTRUCTIONS

Visit our Website for more information on this product

**[www.diversitech-air.com](http://www.diversitech-air.com)**

3200 rue Guénette Saint-Laurent, QC, Canada H4S 2G5  
Tel: 1.800.361.3733 | Fax: 1.514.631.9480 | [info@diversitech.ca](mailto:info@diversitech.ca)

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## SECTION 1 - SAFETY PRECAUTIONS OF FUME & DUST EXTRACTION/COLLECTION



### CAUTION

The fume arm spring has been pre-set at the factory and is under high tension. Do not attempt to make any type of adjustment to or manipulation of the spring as it can cause bodily injury. Please contact Diversitech if you have any questions related to the spring and/or its adjustment.



### READ BEFORE USE

This manual contains specific cautionary statements related to worker safety. To protect yourself and others, read this manual thoroughly and follow as directed before use. Not all hazards of fume & dust control are listed in this manual, and no hazards related to welding, cutting, grinding, painting, deburring or other applications are listed. Consult a qualified safety professional.



### DO NOT USE

Do not use this equipment:

- To extract combustible dusts, liquid vapors, aggressive fumes such as acids.
- To extract smoke or fumes above 180°F / 82°C.
- If the power cord has been damaged or ground (third prong) removed.
- Without a filter.

### 1.1 Symbols

This manual uses several symbols to highlight specific hazards. Be familiar with these symbols and when you see them in this manual, read adjoining warning text to avoid the hazard.



WARNING!  
DANGER!



ELECTRIC  
SHOCK



MOVING  
PARTS



HOT  
PARTS

### 1.2 Users Responsibility

- Improper use can be hazardous. Arms weights 61-68 lbs., care should be taken when transporting.
- All users must carefully read and understand this instruction manual prior to use
- No objects, such as tools, should be placed on or hung from the fume extractor arm.
- When walking near the machine, during use, or performing maintenance, users should be cautious of hitting head on the capture arm and hood.
- When folding and unfolding the capture arm, the user should be cautious of the pinch points in the pantograph frame. All movements should be performed by holding the hood handle and gently moving into position.
- For maintenance of any and all components, power switch must be off and the power source disconnected
- It is your responsibility to follow all applicable ANSI, OSHA, UL, CSA, National & Local Fire Codes, and other regulatory guidelines covering the safe use of equipment that extracts fumes, collects dusts, and exhausts filtered air either indoors or outdoors.
- Before use, inspect the unit for damage and verify it is working properly.
- Only qualified persons should install, operate, maintain, or repair this unit.
- Do not modify or repair the unit with parts or accessories not supplied by the manufacturer.
- Consult filter manufacturer's instructions for filter use and reuse, including instructions for cleaning.

### 1.3 Fume Extraction Hazards

- Breathing smoke, fumes, or dusts produced in applications such as welding, cutting, grinding, painting, deburring are hazardous to user's health. Proper ventilation or use of well maintained fume extraction and/or dust collection equipment helps the user avoid these hazards.
- Breathable contaminants may not be visible or have an odor.
- Stop operation and leave the area immediately if 1) breathing becomes difficult, 2) experience dizziness, impaired vision, 4) or eye/nose/mouth irritation.

## 1.4 Dust Collection Hazards

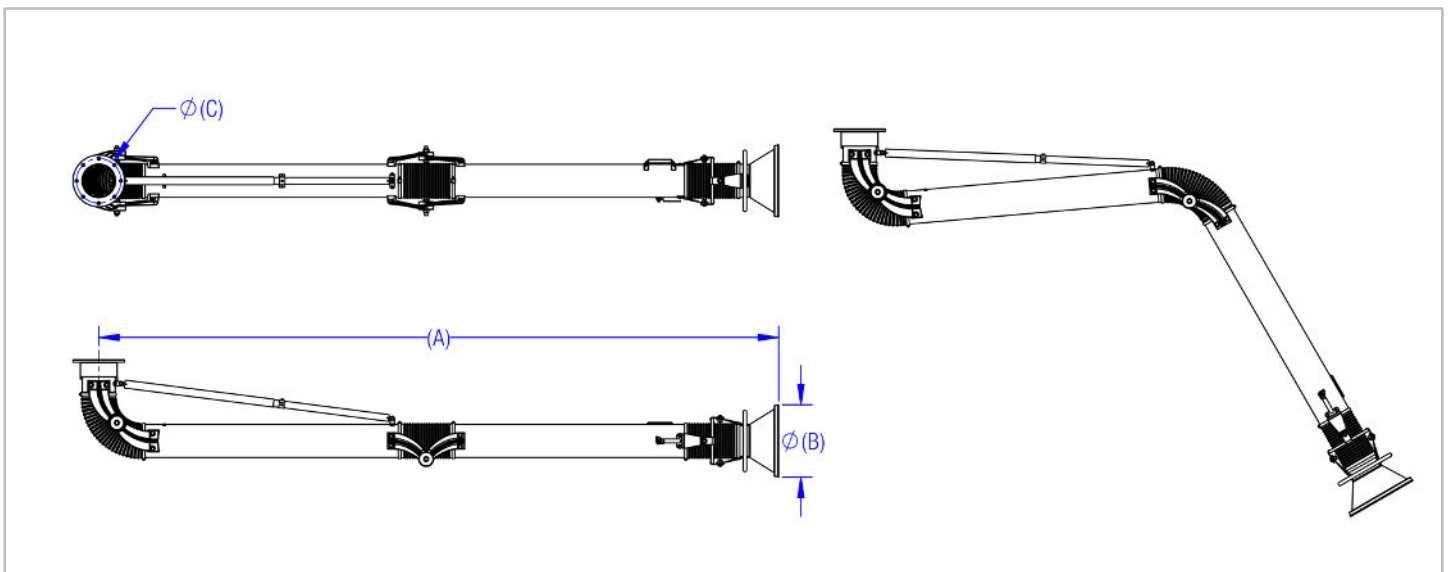
- Dusts from many metalwork, welding, cutting, grinding, painting, or deburring applications can be combustible.
- Do not use or install equipment where any potential for combustible fumes or dusts are present, until a qualified person has indicated it is safe to do so.
- Never use or install equipment where the potential for combustible fumes or dusts are present without a fire/explosion protection system.
- If you are unsure if the product you purchased is correct for your application, call Diversitech at 1-800-361-3733.

## 1.5 Safety Stickers

- This machine is equipped with safety stickers to remind operators of the inherent dangers during use and maintenance.
- The stickers are only reminders, and all safety precautions contained in this manual must be well understood and adhered to by all users.
- See **APPENDIX 8: Sample Safety Stickers** for example of stickers applied to machine.

# SECTION 2 - SPECIFICATIONS

## 2.1 Dimensions & Specifications



Model	Arm Length (ft.)	Arm Diameter (in.)	Net Weight (lbs.)	Gross Weight (lbs.)	Product Dimensions (in.)		
					Length (A)	Hood (B)	Mounting hole pattern (C)
XA4-6H10	10	6	61	86	122	13	8
XA4-6H13	13	6	68	92	156	13	8
XA4-8H10	10	8	72	93	122	14.3	9.7
XA4-8H13	13	8	79	99	156	14.3	9.7

## SECTION 3 - PRE-INSTALLATION

### 3.1 To Setup or Install Safely



- Do not place unit near flammables or combustible surface.
- For safety reasons, a minimum of two installers should be appointed for the installation.

### 3.2 Un-Packaging

1. Immediately upon receiving the unit, carefully examine the carton for damage during transit.
2. Remove packing material.
3. Avoid tipping or inverting during handling.
4. The item serial number, model, and electrical ratings are listed on the nameplate. Record this information in the Maintenance Record provided in **APPENDIX 1: Maintenance Record**, or your own preventative maintenance system.

### 3.3 Tools Required

1. 7/16 Socket or Wrench
2. 9/16 Socket or Wrench
3. Torque Wrench

The tools above are required for unit assembly.

### 3.4 Assembly

- Please follow guidelines in **APPENDIX 2: Arm to Remote Mount Bracket Installation**.

### 3.5 Mounting Options

- For downwards mounting please follow guidelines in **APPENDIX 2 Wall mount bracket standard assembly**.

## SECTION 4 - OPERATION

### 4.1 To Operate Safely



- Read and understand **SECTION 1: Safety Precautions** and **SECTION 4: Operation before use**
- Read and understand all Material Safety Data Sheets and Manufacturer's instructions of all process materials, consumables, and equipment used in conjunction with this equipment.
- Keep away from all mechanical moving parts including motor, gears, and other pinch points.
- Do not use product without first confirming if a Spark Arrestor is required and installed for the type of dust, or fumes you are extracting and/or collection. If you are unsure, call a Diversitech representative at 1-800-361-3733.
- The environment temperature for the operating of the machine is between -10 ° C and 60 ° C.
- The humidity of the interior in which the work is carried out must be between 0% and 90%.
- THE APPLIANCE CAN NOT BE USED IN EXPLOSIVE ENVIRONMENT.

### 4.2 Rules of Use

- In general, do not dismantle or remove any part of the suction arm when it is in use or connected to power.
- Do not insert the power cord in the joints of the arm.
- Do not tamper with the components of the electrical panel.
- Do not run the vacuum cleaner along with the nozzle arm closed.
- Do not pick up liquids.

### 4.3 Pre-Use Checklist

- Read and understand **SECTION 1: Safety Precautions** and ensure **SECTION 3: Pre-Installation** has been followed.
- Visually inspect the flex hoses for damage.
- Ensure Capture Arm can move smoothly and does not contact other nearby machines.
- Prior to use in your application, turn the unit ON, and perform a function test. To do so:
  1. Turn suction ON position.
  2. LOOK: Is the unit level, stable, and that nothing is obstructing the extraction path.
  3. LISTEN: Suction sound smooth and within expected volumes.
  4. FEEL: Place your hand on top of the unit and sense for unexpected vibration. Place your hand in front of the intake hood and sense for expected level(s) of suction.
- Inform all potential users of this equipment where they may find and review this manual.

### 4.4 Principles of Operation

This product is designed to capture and clean smoke and dust from medium & heavy duty welding, soldering, and grinding applications. When operating, air is drawn in to the nozzle, passes through the 6" diameter hose, into the connected blower.

- The operator can then position the capture arm close enough to the source to capture all dust and fumes being produced.
- Ensuring that all safety procedures have been followed, the operator can turn on the blower and begin working.

## 4.5 Failure Event

If, for some reason, during operation there is an accident, a blockage occurs, or the suction arm begins to malfunction, the operator should immediately shut off the machine. This is considered a machine failure and the following steps should be taken:

This product consists of four basic components:

1. Turn the power switch to the OFF position.
2. Seek medical attention if an accident occurred.
3. Follow the guidelines in **SECTION 5: Maintenance & Troubleshooting**.

Remember, under no circumstance should the machine be turned back on while performing maintenance.

## SECTION 5 - MAINTENANCE & TROUBLESHOOTING

### 5.1 To Maintain this Product Safely



- Read and understand **SECTION 1: Safety Precautions** and **SECTION 4: Operation before maintenance**.
- Do not breathe the dust collected from product while changing/cleaning filters or performing maintenance on this product.



- Disconnect power before performing any maintenance on unit, including filter inspection. The input power to this unit is high voltage, and touching any live electrical parts can cause fatal shocks or severe burns. Do not touch live electrical parts.



- Keep away from all mechanical moving parts including motor, gears, and other pinch points while operating.



- Operating this unit causes some parts to heat to a point that will burn bare hands. Before maintenance allow parts to cool or use proper tools and personal protection equipment during maintenance.



- Suction machine must be turned off when performing any maintenance.
- Appropriate ear protection is required according to jurisdiction.

## 5.2 Tools Required



EYE  
PROTECTION



RESPIRATOR



GLOVES



WASTE  
CONTAINER

## 5.3 Routine Maintenance Schedule

The manufacturer recommends the following routine maintenance based on light-duty use in normal operating conditions. Service more frequently if the unit is used in severe conditions.

Frequency	Manual Reference
<b>Pre-Use</b>	
<ul style="list-style-type: none"><li>Perform pre-use checklist to ensure operating correctly.</li></ul>	4.3
<b>As Required</b>	
1. Tighten arm bolts to keep the arm supported	APPENDIX 2
<b>Every (12) months Inspect Basic Components</b>	
1. Clean unreadable labels and exterior surfaces	
2. Check for tears in flex hoses and fitting of hose clamp	



## 5.4 Troubleshooting Procedure

Given that most of the malfunctions occur for improper use of the system, the table below shows some possible malfunctions that may occur, and the measures to be taken to address them.

Problem	Possible Cause	Solution
The suction arm is not able to support itself, to the point of compromising the handling and positioning of the hood.	Loose bolts	Tighten the bolts gradually, be careful not overtighten.
The pipes break in the proximity of the junction	The bolts of the clutches are tightened too much, to the point of overcoming the resistance of the junctions.	Loosen the bolts of the clutches, and replace the pipes: <ul style="list-style-type: none"> <li>• forearm tube of connection hood (the replacement can be done by the customer)</li> <li>• the part of the pipe where is the spring (must be replaced by the manufacturer for safety reasons)</li> </ul>
Broken hose clamps.	Wear, abrasion, drilling etc. caused by incandescent material extracted by the arm.	Remove and replace the hose clamps.
The fan's suction arm stops suddenly	Block of electric current.	Reactivate the power source of the current.
	The fuse has blown.	Relace the fuse.
	The thermal switch has tripped.	Open the control panel and reset the switch. Check out the reasons of the thermal cutoff.
	The engine has blown.	Repair or replace if it is possible. Read the concerning manual.

## SECTION 6 - DECOMMISSIONING

### 6.1 To Decommission this Product Safely



- Read and understand **SECTION 1: Safety Precautions** and **SECTION 4: Operation before maintenance**.
- Do not breathe the dust collected from product while changing/cleaning filters or performing maintenance on this product.



- Disconnect power before performing any maintenance on unit, including filter inspection. The input power to this unit is high voltage, and touching any live electrical parts can cause fatal shocks or severe burns. Do not touch live electrical parts.



- Keep away from all mechanical moving parts including motor, gears, and other pinch points while operating.



- Operating this unit causes some parts to heat to a point that will burn bare hands. Before maintenance allow parts to cool or use proper tools and personal protection equipment during maintenance.



- Suction machine must be turned off when performing any maintenance.
- Appropriate ear protection is required according to jurisdiction.

### 6.2 Tools Required

1. 7/16 Socket or Wrench
2. 9/16 Socket or Wrench

The tools above are required for unit dismantling. Follow Section 3, 5, and APPENDIX 2 for instructions.

### 6.3 Conformity with Recycling Regulations

- All dismantling procedures should be made in compliance with appropriate laws governing the recycling and disposal of materials.
- This machine may contain, but is not limited to:
  1. Steel
  2. Plastic
  3. Rubber
  4. Conductors of electrical system
  5. Aluminum

APPENDIX 1 - MAINTENANCE RECORD

Diversitech Inc. authorizes this page to be photocopied or otherwise reproduced as needed for management of maintenance records.

MANUFACTURER:	DIVERSITECH INC.	MODEL N°	FUME EXTRACTOR ARM	SERIAL N°	
SERVICE LOCATION:				CONTROL N°	

Date	Description of Service	Serviced By	Location	Comments

Only use manufacturer approved replacement parts on this unit.

## APPENDIX 2 - ARM TO REMOTE MOUNT BRACKET INSTALLATION

### 2.1 Wall Mount Bracket Standard Assembly 1



#### STEP 1. Unpack capture arm

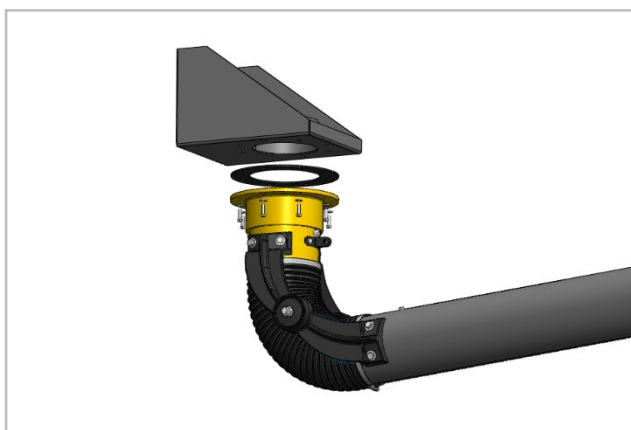
- Diversitech Capture arm is shipped assembled.
- Telescopic spring assembly is shipped loose.

#### STEP 2. Install the Wall Mount Bracket

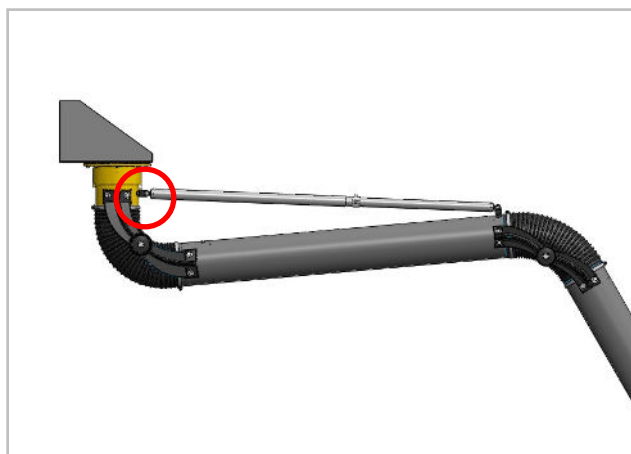
- Using the appropriate hardware, install the wall mount bracket at proper height for the arm length.
- Wall Mount Bracket to be purchased separately.

#### STEP 3. Attach capture arm to Wall Mounting Bracket.

- Attach capture arm onto Wall Mount Bracket.
- Place the rubber gasket (it is placed in the Capture arm package) between the Mount Bracket and the Swivel Base
- Ensure the “stopper” is facing the wall or the post
- Tighten all Bolts (8) with Washers (8)
- Torque each bolt to 23 N m



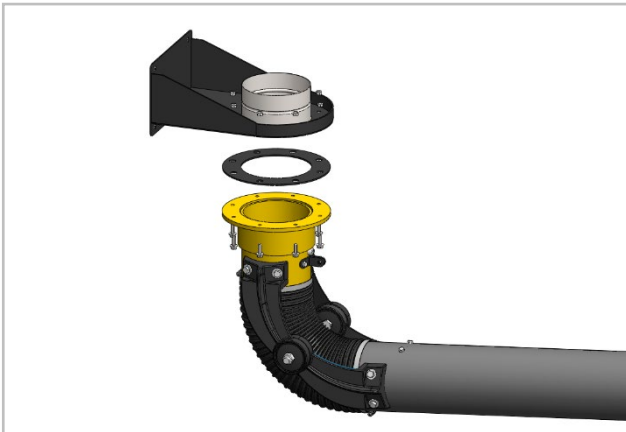
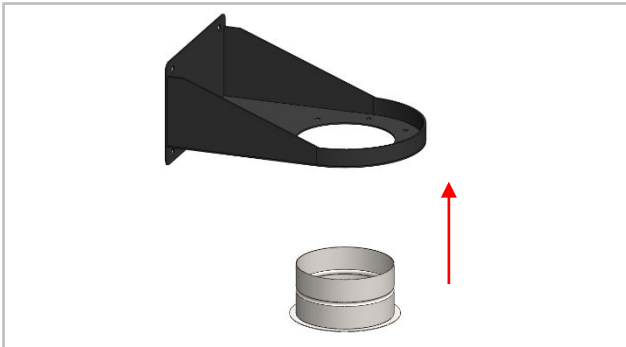
Quantity	Hardware
1	Wall Mount Bracket
1	Capture Arm Assembly
1	Rubber Gasket
8	1/4" Hex Head Bolt
8	1/4" Washer



#### STEP 5. Install the Telescopic Spring.

- To install the telescopic spring, push the arm up until the eyelet on the telescopic spring meets with the bracket.
- Arm joints are adjusted at the factory and will require adjustment prior to usage.
- Move arm left, right, up, down to ensure arm stays in position.

## 2.2 Wall Mount Bracket Standard Assembly 2



### STEP 1. Unpack capture arm

- Diversitech Capture arm is shipped assembled.
- Telescopic spring assembly is shipped loose.

### STEP 2. Prepare the items.

- BR006 Wall Mount Bracket to be purchased separately
- Flanged Pipe will be found in the BR006 package

Quantity	Hardware	Quantity	Hardware
1	BR006 Wall Mount Bracket	1	Flanged pipe

### STEP 3. Install the BR006 Wall Mount Bracket and Insert the flanged pipe.

- Using the appropriate hardware, secure the wall mount bracket using the pre-drilled holes in the bracket.
- Insert the flanged pipe through the BR006 wall mount bracket from the bottom side.
- Flanged Pipe places between the BR006 and the Capture arm.

### STEP 4. Install the Capture arm.

- Using provided fasteners attach the Capture arm onto the BR006 Wall Mount Bracket.
- Ensure the “tooth” is facing the wall or the post
- The Rubber gasket places between the Capture Arm and the BR006 Wall Mount Bracket.

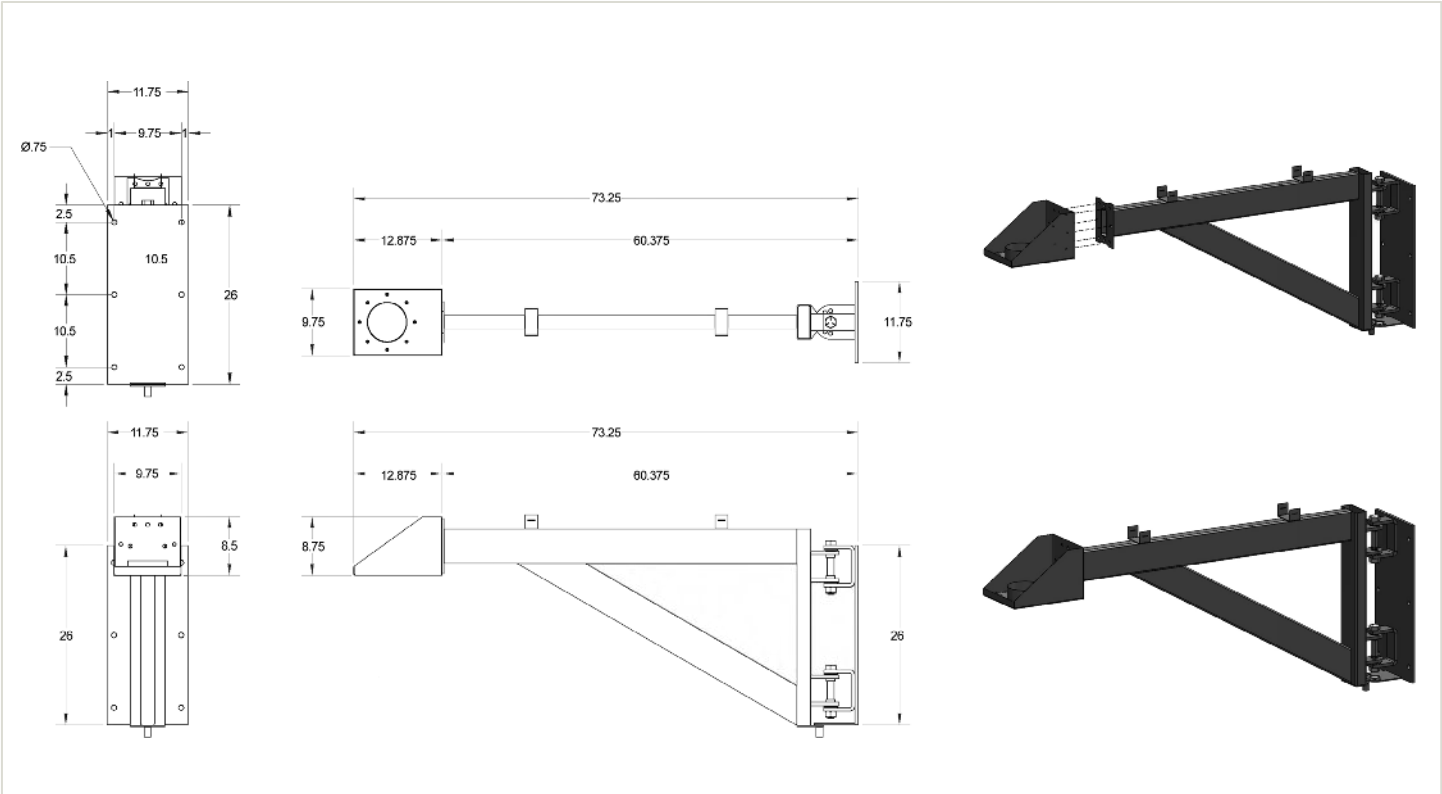
Quantity	Hardware	Quantity	Hardware
1	Rubber gasket	1	Capture Arm Assembly
8	1/4" Hex Head Bolt	8	1/4" Washer
8	1/4" Lock Nut.		

### STEP 5. Install the Telescopic Spring.

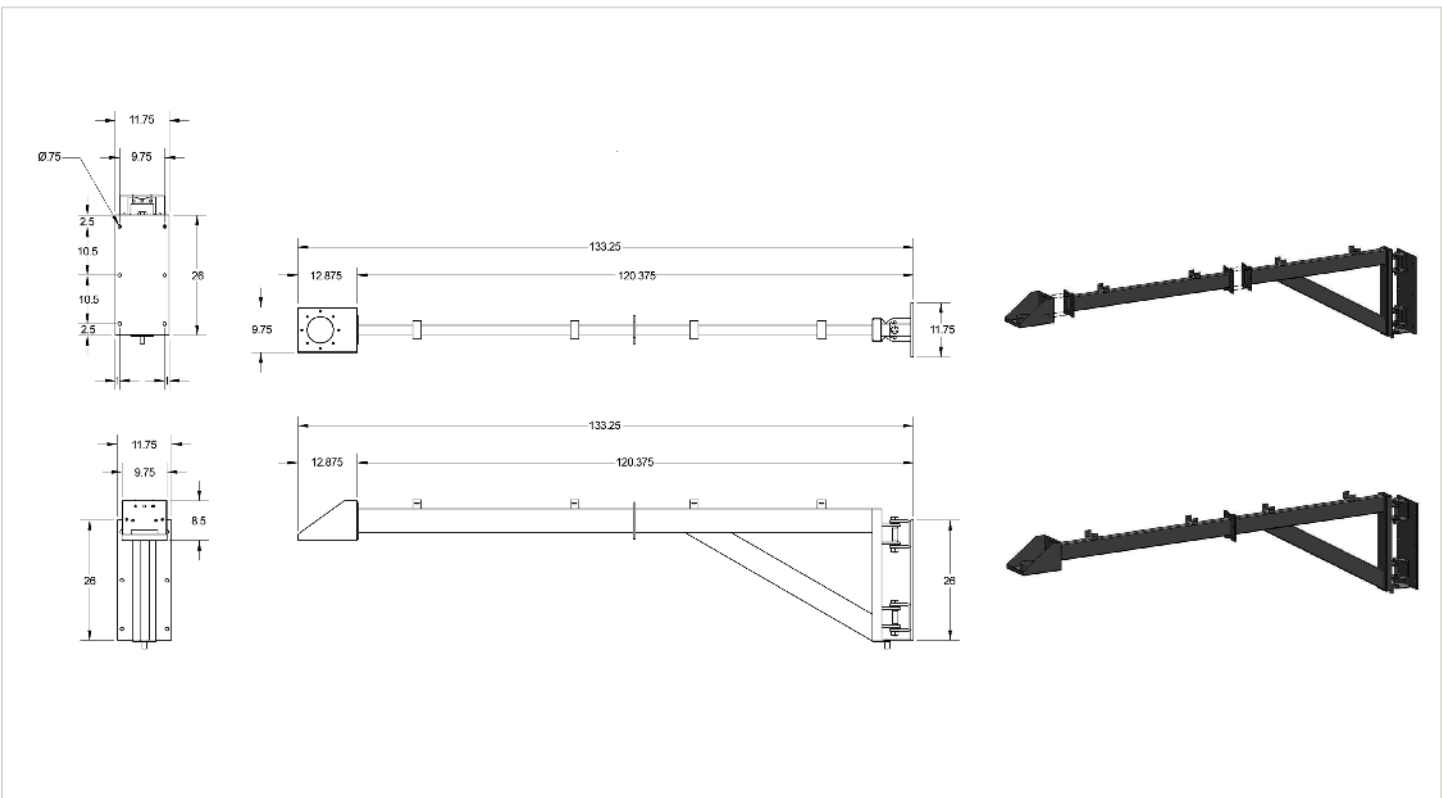
- To install the telescopic spring, push the arm up until the eyelet on the telescopic spring meets with the bracket.
- Arm joints are adjusted at the factory and will require adjustment prior to usage.
- Move arm left, right, up, down to ensure arm stays in position.

APPENDIX 3 - BOOM EXTENSION INSTALLATION

3.1 Extension Boom - 5ft Long

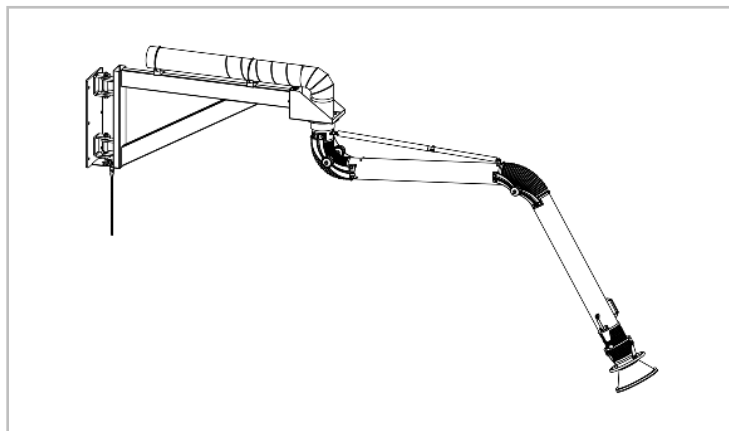


3.2 Extension Boom - 10ft Long

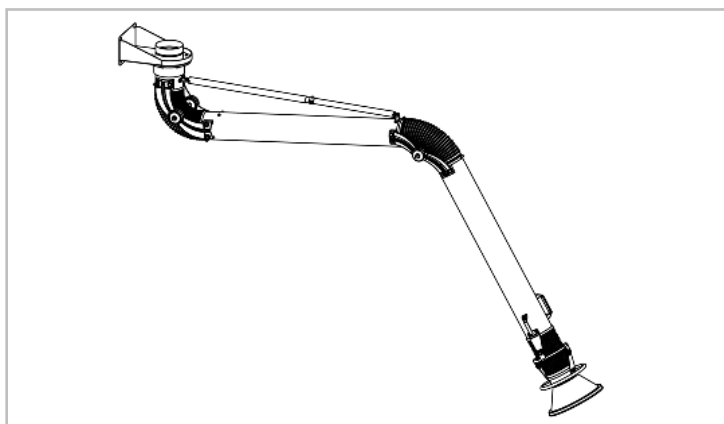


## APPENDIX 4 - MOUNTING CONFIGURATIONS

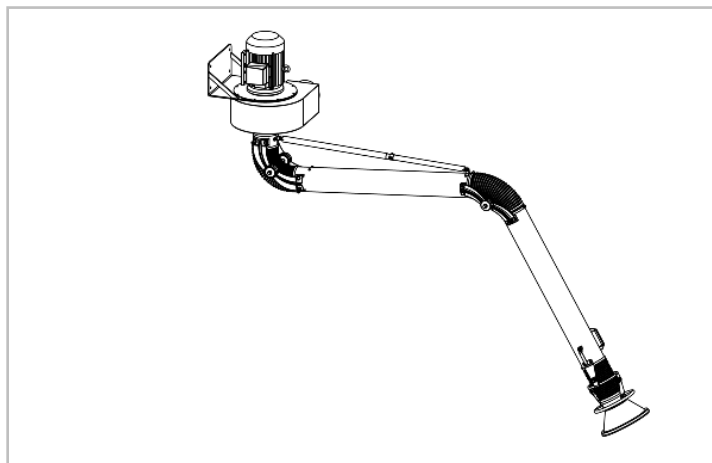
### 4.1 Hanging Arm Configuration with Boom



### 4.2 Hanging Arm Configuration with BR006 Wall Mount Bracket



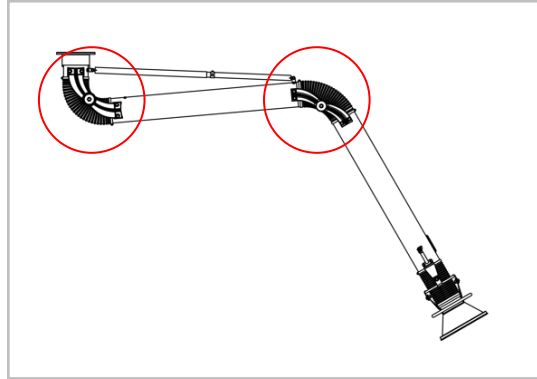
### 4.3 Hanging Arm Configuration with Blower



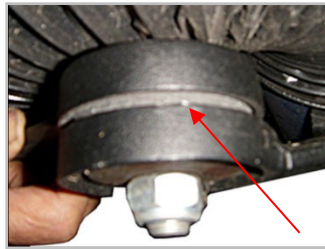
## APPENDIX 5 – MAINTENANCE INSTRUCTION

### 5.1 Adjust the External Joints

- Adjust the External Joints by tightening the bolts with (2) wrenches.
- This increases the force on the friction discs.

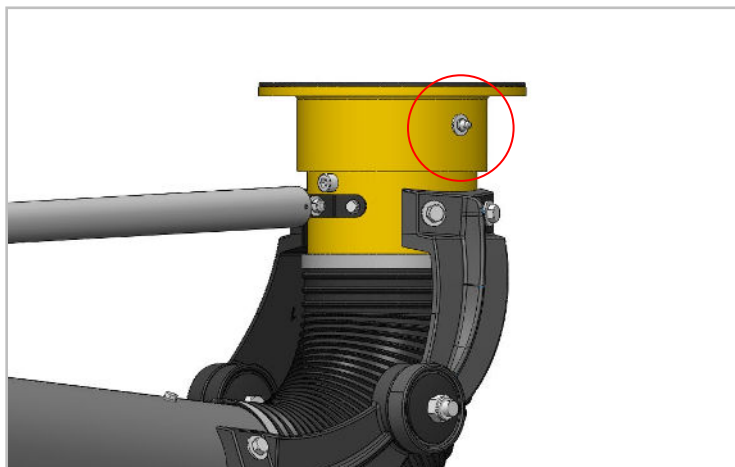


Do not overtighten. This could cause the friction disk failure



### 5.2 Apply a medium duty grease

- Apply a medium duty grease to grease fitting on side of swivel base.
- Continue to grease at regular intervals to ensure free movement of arm.





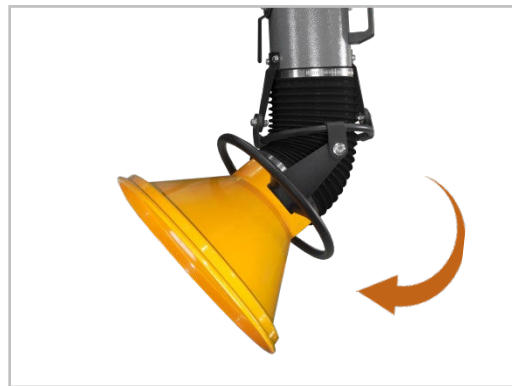
### 5.3 Damper operation

- Operate the damper to adjust the air flow.
- Adjust the damper clockwise to increase air flow
- Adjust the damper counterclockwise to decrease air flow.



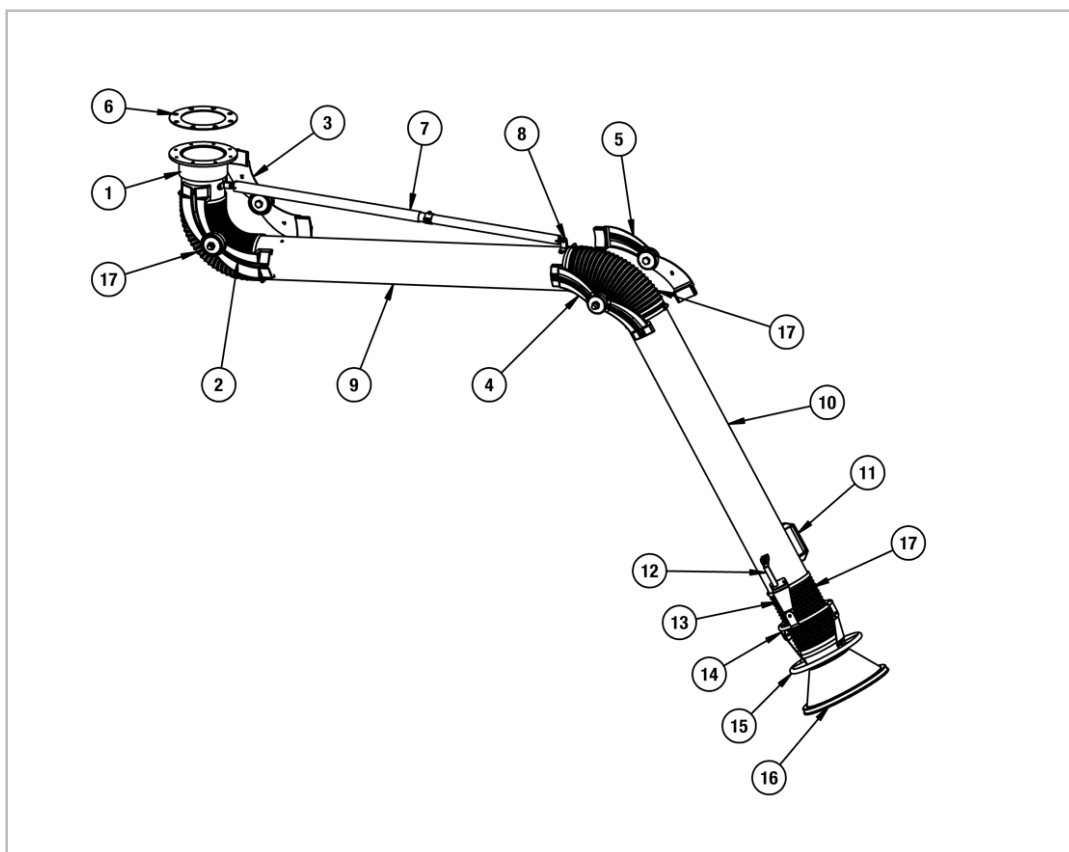
### 5.4 Hood Ring

- Adjust direction of the hood depending on demand.



## APPENDIX 6 – PART LIST

### 6.1 Hanging Capture Arm Part List

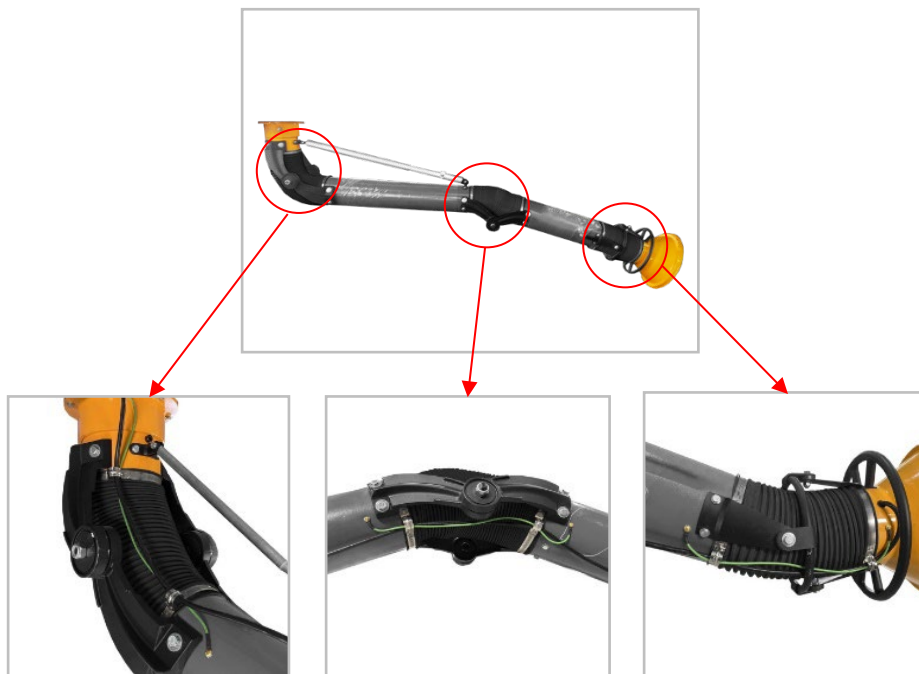


1	Swivel Base Assembly	11	Handle
2	External Joints Assembly 1	12	Damper Assembly with Handle
3	External Joints Assembly 2	13	Bracket for hood connection (Qty 4)
4	External Joints Assembly 3	14	Fixing Frame
5	External Joints Assembly 4	15	Hood Ring
6	Rubber Gasket	16	Hood Assembly
7	Telescoping Spring with Spring Stopper	17	Flex hose (set of 3)
8	T Fixing Base (Qty 2)		
9	Steel Pipe A		
10	Steel Pipe B		

## APPENDIX 7 – OPTIONS

### 7.1 Grounding Capture Arm

- Capture Arm has connectivity between the swivel base and the pipe closest to the hood. Grounding is achieved by mounting a grounding strap between the swivel base and the nearest off-arm grounding source and also between the hood and the nearest bolt on the arm pipe.



### 7.2 Light Kit



Wired Light Kit (LK-100)

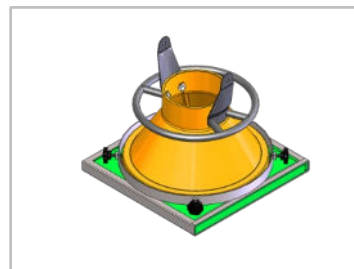


LED Touch Light Kit (LK-200)

### 7.3 Hood Filter






Spark arrester filter








Paint arrester filter

## APPENDIX 8 – SAMPLE SAFETY STICKERS

The machine is marked with a wet filtration safety sticker to remind the operator of safe working practices:

WARNING	AVERTISSEMENT	ADVERTENCIA	WET FILTRATION
<b>DO NOT USE this equipment:</b>	<b>NE PAS UTILISER cet équipement :</b>	<b>NO USAR este equipo:</b>	
 <ul style="list-style-type: none"> <li>To collect smoke, fumes, liquid vapors, or aggressive fumes such as acids</li> </ul>	<ul style="list-style-type: none"> <li>Pour l'extraction de fumées ou d'émanations de plus de 82 °C / 180 °F.</li> </ul>	<ul style="list-style-type: none"> <li>Para extraer humo o gases superiores a 180°F / 82°C.</li> </ul>	
 <ul style="list-style-type: none"> <li>If the power cord has been damaged or ground (third prong) removed.</li> </ul>	<ul style="list-style-type: none"> <li>Si le cordon d'alimentation est endommagé ou si la mise à la terre (troisième broche) a été retirée.</li> </ul>	<ul style="list-style-type: none"> <li>Si el cable está dañado o se le ha quitado el tierra (tercera punta).</li> </ul>	
 <ul style="list-style-type: none"> <li>Without the proper water level in basin</li> </ul>	<ul style="list-style-type: none"> <li>Si le niveau d'eau dans le bassin n'est pas adéquat.</li> </ul>	<ul style="list-style-type: none"> <li>Sin el nivel de agua adecuado en el depósito.</li> </ul>	

The machine is marked with safety stickers in appropriate places to remind the operator of safe working practices.

STICKERS APPLIED TO MACHINE				
Figure 1	Figure 2	Figure 3	Figure 4	Figure 5
Foot Trap Hazard	Falling Objects Hazard	Moving Parts Hazard	Electric Shock Hazard	Loud Noise Hazard
 <b>CAUTION</b> FOOT TRAP HAZARD PROPER FOOTWEAR REQUIRED	 <b>CAUTION</b> FALLING OBJECTS HAZARD DO NOT PLACE OBJECTS ON MACHINE	 <b>CAUTION</b> MOVING PARTS HAZARD DO NOT TOUCH - DISCONNECT POWER BEFORE OPENING	 <b>CAUTION</b> ELECTRIC SHOCK HAZARD SERVICE BY TRAINED PERSONNEL ONLY	 <b>CAUTION</b> LOUD NOISE HAZARD WEAR EAR PROTECTION DURING OPERATION

[illegible]

# NOTES

[illegible]

## LIMITED EQUIPMENT WARRANTY

For a period of 2 years from the date of purchase, all Diversitech products are warranted to be free from defects in material, workmanship, and construction, when used in accordance with installation, maintenance instructions, and expressly stated proper use application(s). Diversitech Inc. will repair or replace, at our option, any defective parts which fail during the warranty period. This warranty is limited to replacement parts ONLY, and does not cover personal liability, property loss, normal wear; and does not cover losses resulting from (or due to) improper installation, inadequate maintenance, misapplication, misuse, or use above rated capacities.

## FREIGHT CLAIMS

Shipments must be inspected upon arrival. All Diversitech units are sold ex-plant. Therefore, it is the receiver's responsibility to file any freight claims with the carrier for obvious or concealed damages. Damaged shipments must be refused at time of receipt, by consignee.

## RETURN MATERIAL POLICY

Prior to the return of material, for whatever reason, a return manufacturing authorization number (RMA#) is required from the Diversitech customer service department. This procedure is necessary for proper control and handling of returned materials. Call 1-800-361-3733 or email [support@diversitech.ca](mailto:support@diversitech.ca) to obtain an RMA.

All material must be returned prepaid. Credit will be given for returns for warranty repair or replacement. Freight collect shipments, or freight without an RMA, will not be accepted. It is the shipper's responsibility to ensure that material being returned to Diversitech is adequately packaged for shipment to preclude damages.



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information on this product  
[www.diversitech-air.com](http://www.diversitech-air.com)

3200 rue Guénette  
Saint-Laurent, Quebec H4S 2G5  
Email: [info@diversitech.ca](mailto:info@diversitech.ca)