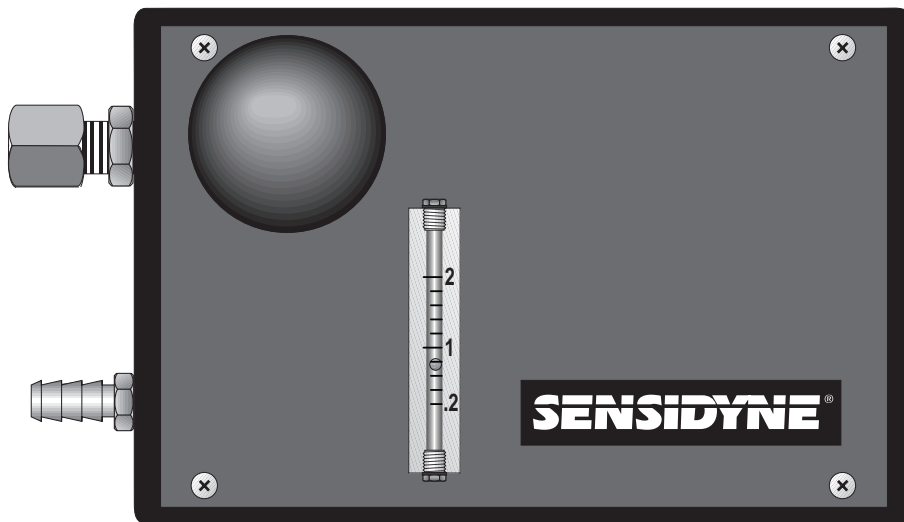


ASPIRATOR (with 0.2–2.0 LPM Flowmeter)

INSTRUCTIONS



THIS MANUAL COVERS THE FOLLOWING ASPIRATOR MODELS

Part Number	Aspirator Type
7013154-1	Brass
7013154-2	Stainless Steel

SENSIDYNE®

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WARNINGS !



READ AND UNDERSTAND ALL WARNINGS BEFORE USE

Read and understand ALL warnings before using this product. Failure to read, understand, and comply with ALL warnings could result in property damage, severe personal injury, or death.

Read and understand ALL applicable Federal, State, and Local environmental health and safety laws and regulations, including OSHA. Ensure complete compliance with ALL applicable laws and regulations before and during use of this product.

UNDER NO CIRCUMSTANCES should this product be used except by qualified, trained, technically competent personnel and not until the warnings, *Operation & Service Manual*, labels, and other literature accompanying this product have been read and understood.

The *Operation & Service Manual* must be read and understood by each user before operating this product or using its accessories, in order to ensure proper and safe use and installation of this product and to ensure familiarity with the proper treatment and safety procedures in the event of an accident.

SENSIDYNE ASSUMES NO RESPONSIBILITY OR LIABILITY WHATSOEVER, TO ANY PARTY WHOSOEVER, FOR ANY PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH RECEIVED BY OR RESULTING FROM IN WHOLE OR IN PART, THE IMPROPER USE, INSTALLATION OR STORAGE OF THIS PRODUCT BY THE USER, PERSON, FIRM, ENTITY, CORPORATION, OR PARTY NOT ADHERING TO THE INSTRUCTIONS AND WARNINGS OR NOT ADHERING TO ALL FEDERAL, STATE, AND LOCAL ENVIRONMENT AND OCCUPATIONAL HEALTH AND SAFETY LAWS AND REGULATIONS.

DO NOT remove, cover, or alter any label or tag on this product, its accessories, or related products.

DO NOT operate this product should it malfunction or require repair. **DO NOT** attempt to repair or modify the instrument, except as specified in the *Operation & Service Manual*. Operation of a malfunctioning product, or a product requiring repair may result in serious personal injury or death. If repair is needed, contact Sensidyne Service to arrange for a Returned Material Authorization (RMA).

ONLY use genuine SENSIDYNE® replacement parts when performing any maintenance procedures provided in this manual. *Failure to do so may seriously impair instrument performance.* Repair or alteration of the product beyond the scope of these maintenance instructions, or by anyone other than an authorized SENSIDYNE® service center, *will void the warranty*, and could cause the product to fail to perform as designed, and persons who rely on this product for their safety could sustain severe personal injury or death.

SECTION ONE

Installation & Operation

1.1 Aspirator Installation & Operation

- 1) Mount the aspirator to a wall or a table using the holes in the back of the case.
- 2) Attach an air supply (20–100 psi) to the 1/4" NPT Fitting on side of the aspirator (refer to Figure 1.)
- 3) Attach sample inlet tubing to the 1/4" aspirator inlet hose barb. Attach the other end to the sensor flow block/outlet. See Appendix B—Specifications for tubing size and length. Also refer to the Compatibility Chart (Figure 4) for sample inlet tubing material.
- 4) Turn on the air Supply to the aspirator assembly (at 20–100 psi) and adjust the flow control valve counterclockwise until the flowmeter ball is set to the desired flow rate for your transmitter. If you are using an Aspirable or Sample Draw transmitter, the flow rate should be set to .75 LPM. The center of the ball should be located just below the 0.8 LPM mark on the flowmeter (see Figure 1).

NOTE

If the exhaust air is to be transported to a different area, the exhaust muffler may be removed and a 1/8" NPT 1/4" hose barb fitting may be installed to allow connection of exhaust tubing (refer to Figure 2). The maximum exhaust tubing lengths are as follows: 10 ft (1/8" I.D.); 50 ft (3/16" I.D.); 100 ft (1/4" I.D.).

1.2 Filter Installation

Filter assemblies may be installed between the flow block and the aspirator, or preceding the flow block. See Figure 3 for examples of various configurations.

NOTE

There are 2 types of filters that can be used with fixed system flow blocks. Follow the installation instructions for the filter part number that comes with that system.

• 1/8" NPT Filter Assembly (PN^o 7011756-1 or -2)

- 1) Remove the 1/4" hose barb from the inlet side of the flow block assembly. (Flow block assembly part numbers 7010273-3, 7010670-1, or 7010944-1.)
- 2) Install the 1/8" NPT Filter assembly to the flow block assembly. (When using flow block PN^o 7010944-1, put teflon tape on the threads of the 1/8" NPT filter before installation)
- 3) Filter media should be cleaned or replaced if the desired flow cannot be achieved (refer to Section Two —Maintenance).

• Bayonet Filter (PN^o 7011757-1 or -2)

- 1) Remove the 1/4" hose barb from the flow block assembly PN^o 7011736-1 inlet (hose barb on the bottom side).
- 2) Install the bayonet filter assembly.
- 3) Filter media should be cleaned or replaced if the desired flow cannot be achieved (refer to Section Two —Maintenance).

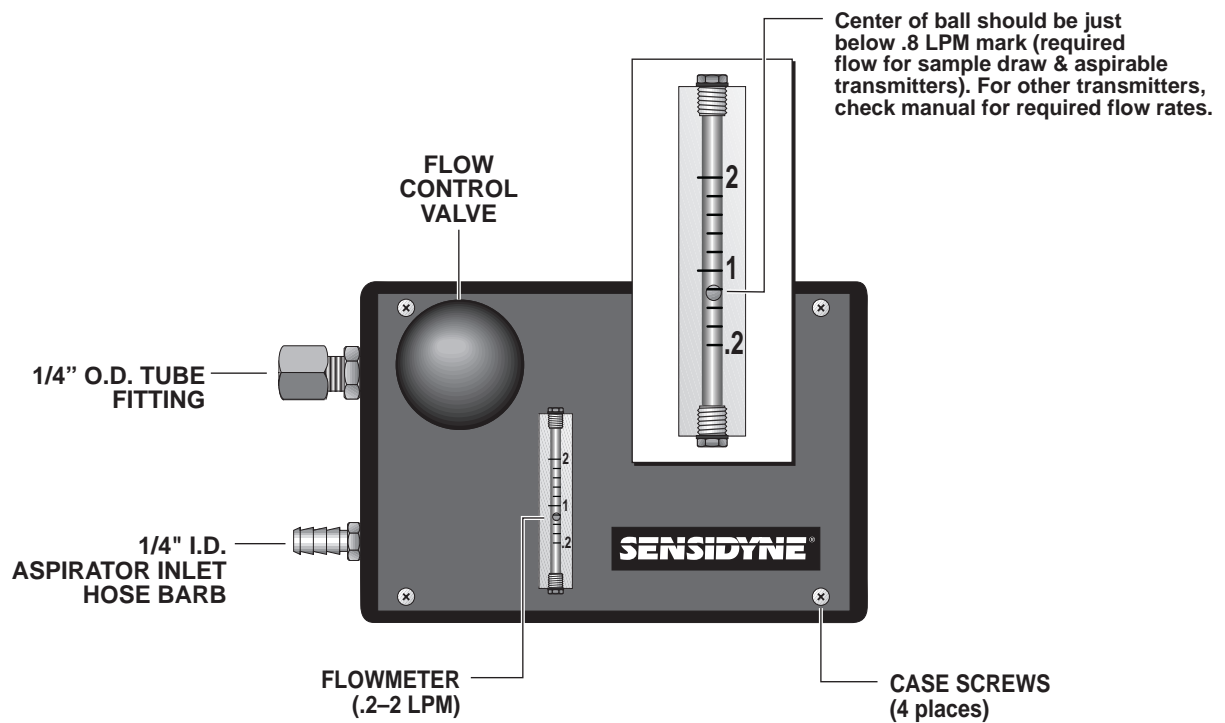


Figure 1
Sensidyne Aspirator (Front View)

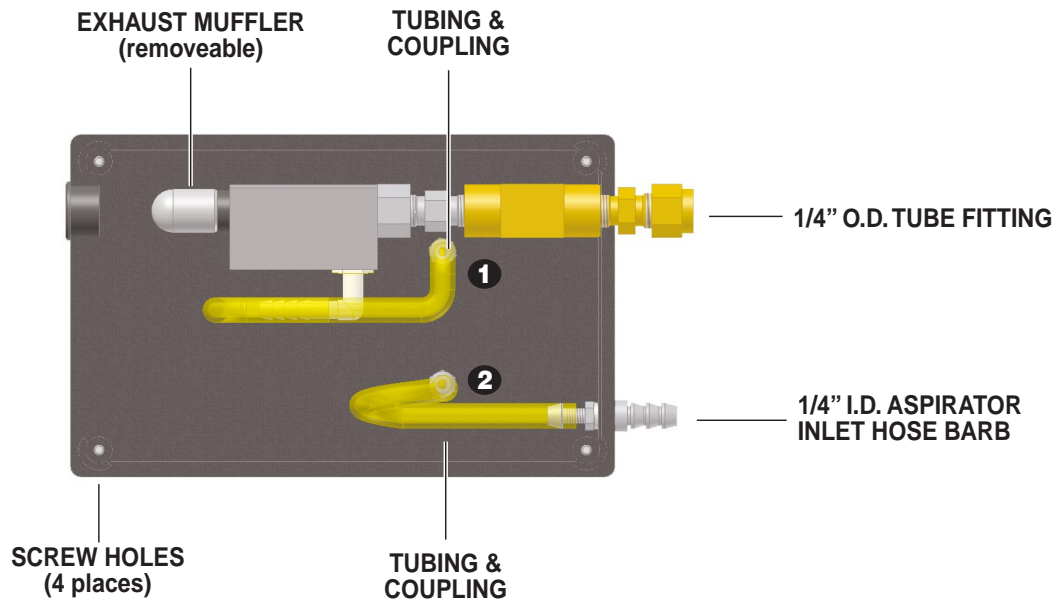
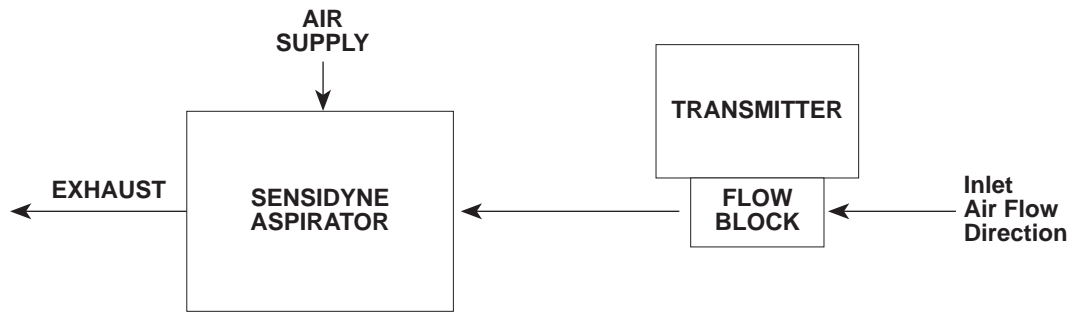
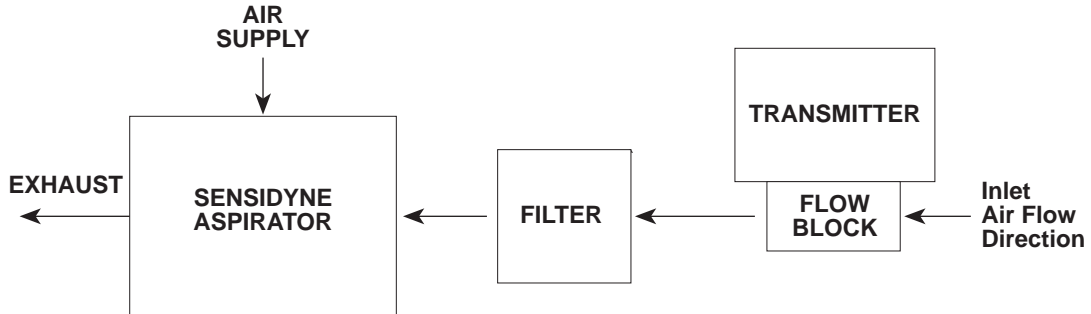


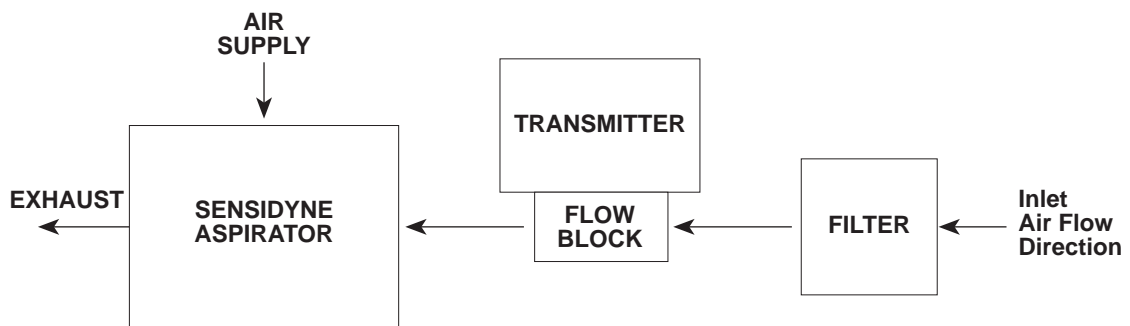
Figure 2
Sensidyne Aspirator (Inside View)



A ASPIRATOR FLOW — NO FILTER INSTALLED



B ASPIRATOR FLOW — FILTER INSTALLED AT ASPIRATOR



C ASPIRATOR FLOW — FILTER INSTALLED BEFORE FIXED SYSTEM

Figure 3
Flow Block Diagram

TARGET GAS	METAL					PLASTIC			ELASTOMER			
	ALUMINIUM	BRASS	COPPER	MONEL	STAINLESS STEEL	KEL - F	TEFLON	TEFZEL	KYNAR	VITON	BUNA - N	NEOPRENE
AIR												
AMMONIA												
ARSINE												
BORON TRICHLORIDE												
BORON TRIFLUORIDE												
BROMINE												
h - BUTANE												
CARBON DIOXIDE												
CARBON MONOXIDE												
CHLORINE												
DIBORANE												
ETHANE												
FLUORINE												
GERMANE												
HYDROGEN												
HYDROGEN CHLORIDE												
HYDROGEN CYANIDE												
HYDROGEN FLUORIDE												
HYDROGEN SULFIDE												
ISOBUTANE												
ISOBUTYLENE												
METHANE												
NITROGEN												
NITROGEN DIOXIDE												
OXYGEN												
PHOSPHINE												
PROPANE												
PROPYLENE												
SULFUR DIOXIDE												



RECOMMENDED MATERIAL.

OTHER MATERIALS ARE NOT RECOMMENDED DUE TO POSSIBLE CHEMICAL AND / OR PHYSICAL INTERACTION WITH THE GAS OR SUBSTANCE VAPOR.

Figure 4
Material Compatibility Chart

2.1 Aspirator Maintenance

- 1) If the desired flow cannot be achieved check the inlet filter. If the filter is clean, check the aspirator for leaks. Apply Snoop Leak Detector (PN° 7015799) to all fittings and inspect for bubbles or increased supply pressure.
- 2) If leaks are detected, tighten the fittings and re-check.
- 3) If the leaks cannot be stopped or the desired flow cannot be obtained, contact Sensidyne Service Department. Refer to Appendix C for information on obtaining a Returned Materials Authorization Number (RMA#).

2.2 Filter Maintenance

Refer to Figure 5 and perform filter maintenance as follows:

NOTE

PN° 7011756-2 (1/8" NPT) and PN° 7011757-2 (Bayonet) filter assemblies do not contain foam filters.

- 1) Unscrew two halves of the filter assembly and remove the foam filter (if applicable) and the porous disk.
- 2) Clean the filter media (foam filter and porous disk) by blowing dry compressed air across them.

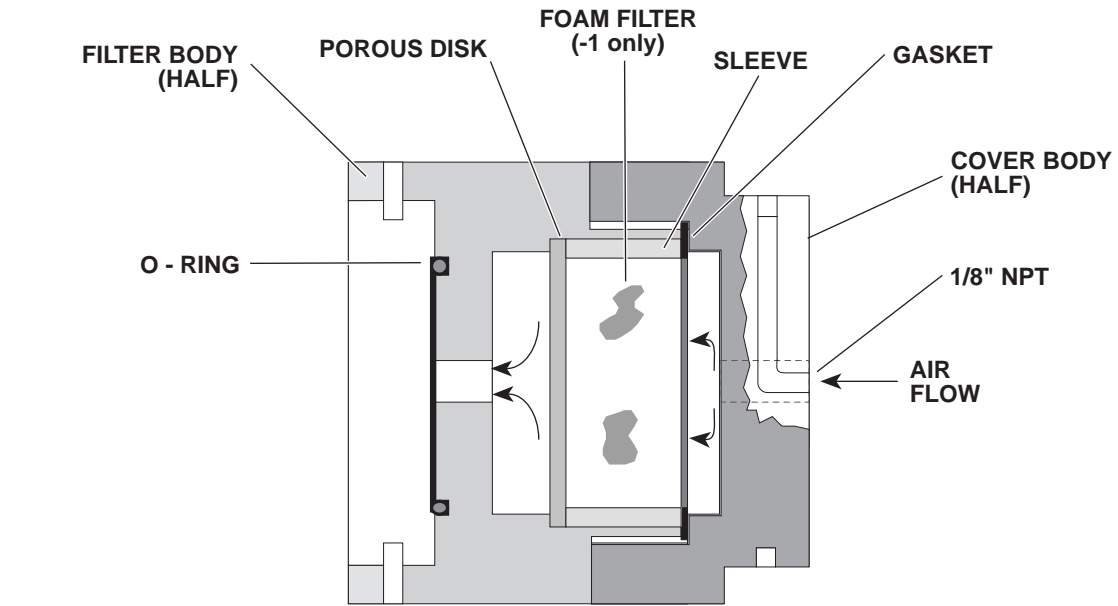
WARNING

Do not use solvents or permit the filter media to become wet. If the filter media becomes wet, this may restrict the flow of the aspirator.

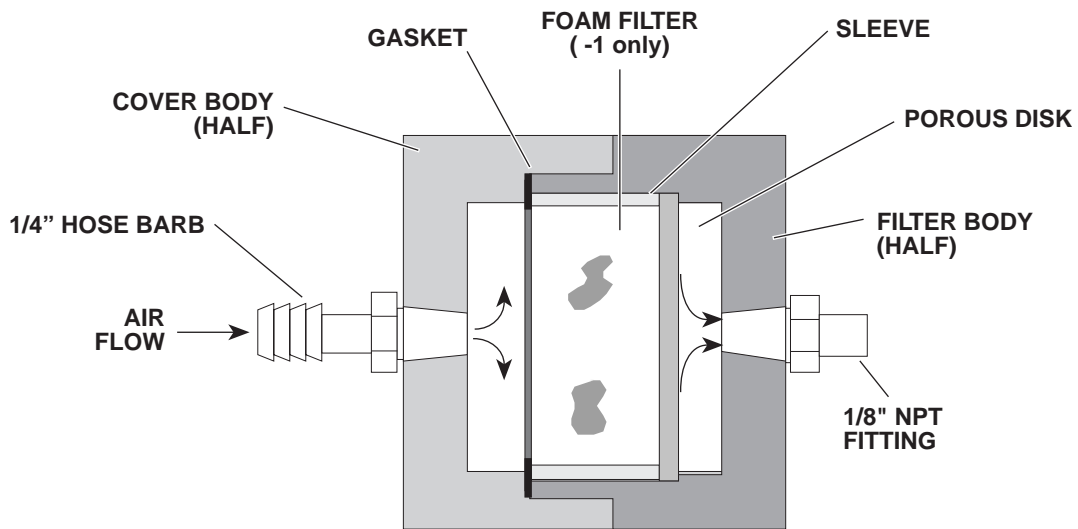
- 3) Reassemble the filter media into the filter assembly and screw the two halves together

WARNING

Filter assemblies without a foam filter must be used on Cl₂, HF, HCL, F₂, BR₂, B₂H₆ and NO₂ systems if the filter is installed before the flow block (refer to Figure 3).



BAYONET FILTER
(7011757-1 or 7011757-2)



1/8" NPT FILTER
(7011756-1 or 7011756-2)

Figure 5
Filter Assemblies

APPENDIX A

Parts List

Part Number	Item/Description
1/8" NPT Filter (with Foam Filter) —PN° 7011756-1	
7011759-1	Body, Filter
7011688-1	Body, Cover
7015897	Foam Filter
7016001	Porous Disk
7011758-1	Sleeve
7015986	Fitting, 1/8" NPT
7016000	Gasket, Rubber
7015960	Nipple, Hose Barb
1/8" NPT Filter (without Foam Filter) —PN° 7011756-2	
7011759-1	Body, Filter
7011688-1	Body, Cover
7016001	Porous Disk
7011758-1	Sleeve
7015986	Fitting, 1/8" NPT
7016000	Gasket, Rubber
7015960	nipple, Hose Barb
Bayonet Filter (with Foam Filter) —PN° 7011757-1	
7011760-1	Body, Filter
7011711-1	Body, Cover
7015897	Foam Filter
7016001	Porous Disk
7011758-1	Sleeve
7016000	Gasket, Rubber
7015-040-128	O-ring
Bayonet Filter (without Foam Filter) —PN° 7011757-2	
7011760-1	Body, Filter
7011711-1	Body, Cover
7016001	Porous Disk
7011758-1	Sleeve
7016000	Gasket, Rubber
7015-040-128	O-ring

APPENDIX B

Specifications

Aspirator Flow Range 0.2–2.0 LPM

Air Supply Fitting 1/4" I.D. Tube Fitting

Sample Inlet Tubing (Max Length) 100 ft @ 1/8" I.D.
 400 ft @ 1/4" I.D.
 900 ft @ 3/8" I.D.

Air Supply Pressure 20-100 psi

Air Supply Consumption 7 LPM

Air Supply Consumption (Volume)2 LPM (Min) to 2 LPM (Max)

Aspirator Dimensions 7.52" (L) x 4.25" (W) x 4.16" (H)
 191.0 mm (L) x 108.0 mm (W) x 105.7 mm (H)

Maximum Line Length at Baffle Outlet

All tests were performed with a filter and 100 ft of 1/8" tubing connected to the inlet of the aspirator. Removal of the filter produced negligible changes in the flow rate. Maximum line lengths were determined to reach indicated flows.

Tubing I.D.	Pressure	2.0 LPM	1.5 LPM	1.0 LPM
1/8"	90 psi	15 ft	18 ft	21 ft
	50 psi	14 ft	19 ft	25 ft
	10 psi	20 psi *	16 psi *	5 ft
3/16"	90 psi	92 ft	114 ft	> 124 ft
	50 psi	70 ft	104 ft	> 124 ft
	10 psi	–	–	16 ft
1/4"	90 psi	> 143 ft	> 143 ft	> 143 ft
	50 psi	> 143 ft	> 143 ft	> 143 ft
	10 psi	–	–	68 ft

* Pressure to reach indicated flows with no length.

Maximum Exhaust Tubing Length

1/8" I.D. = 10 feet

3/16" I.D. = 50 feet

1/4" I.D. = 100 feet

Returned Material Authoirzation

Sensidyne, LP maintains an instrument service facility at the factory to provide its customers with both warranty and non-warranty repair service. Sensidyne, LP assumes no liability for service performed by personnel other than Sensidyne, LP personnel. To facilitate the repair process, please contact the Sensidyne Service Department in advance for assistance with a problem which cannot be remedied and/or requires the return of the product to the factory. All returned products require a Returned Material Authorization (RMA) number. Sensidyne Service Department personnel may be reached at:

SENSIDYNE, LP
16333 Bay Vista Drive
Clearwater, FL 33760
Telephone: (800) 451-9444
(727) 530-3602
FAX (727) 539-0550

All non-warranty repair orders will have a minimum fee whether the repair is authorized or not. This fee includes handling, administration and technical expenses for inspecting the instrument and providing an estimate. However, the estimate fee is waived if the repair is authorized.

If you wish to set a limit to the authorized repair cost, state a "not to exceed" figure on your purchase order. Please indicate if a price quotation is required before authorization of the repair cost, understanding that this invokes extra cost and handling delay. Sensidyne, LP's

repair policy is to perform all needed repairs to restore the instrument to its full operating condition.

Repairs are handled on a "first in-first out" basis. Your order may be expedited if you authorize an expediting fee. This will place your order next in line behind orders currently in process.

Pack the instrument and its accessories (preferably in its original packing) and enclose your return address, purchase order, shipping and billing information, RMA#, a description of the problem encountered with your instrument and any special instructions. All prices are subject to change without notice.

If this is the first time you are dealing directly with the factory, you will be asked to prepay or authorize a C.O.D. shipment.

Send the instrument, prepaid, to:

SENSIDYNE, LP
16333 BAY VISTA DRIVE
CLEARWATER, FL 33760

ATTENTION: Service Department

RMA: _____

SERVICE OPTIONS

The Sensidyne Service Department offers you a variety of service options that will help to increase your user confidence while minimizing costly interruptions and maintenance costs. These options include initial training, on-site technical assistance, and full factory repairs. Sensidyne has developed several programs which will allow you to select just the right options which are best suited to your applications and needs. For further information, contact the Sensidyne Service Department.