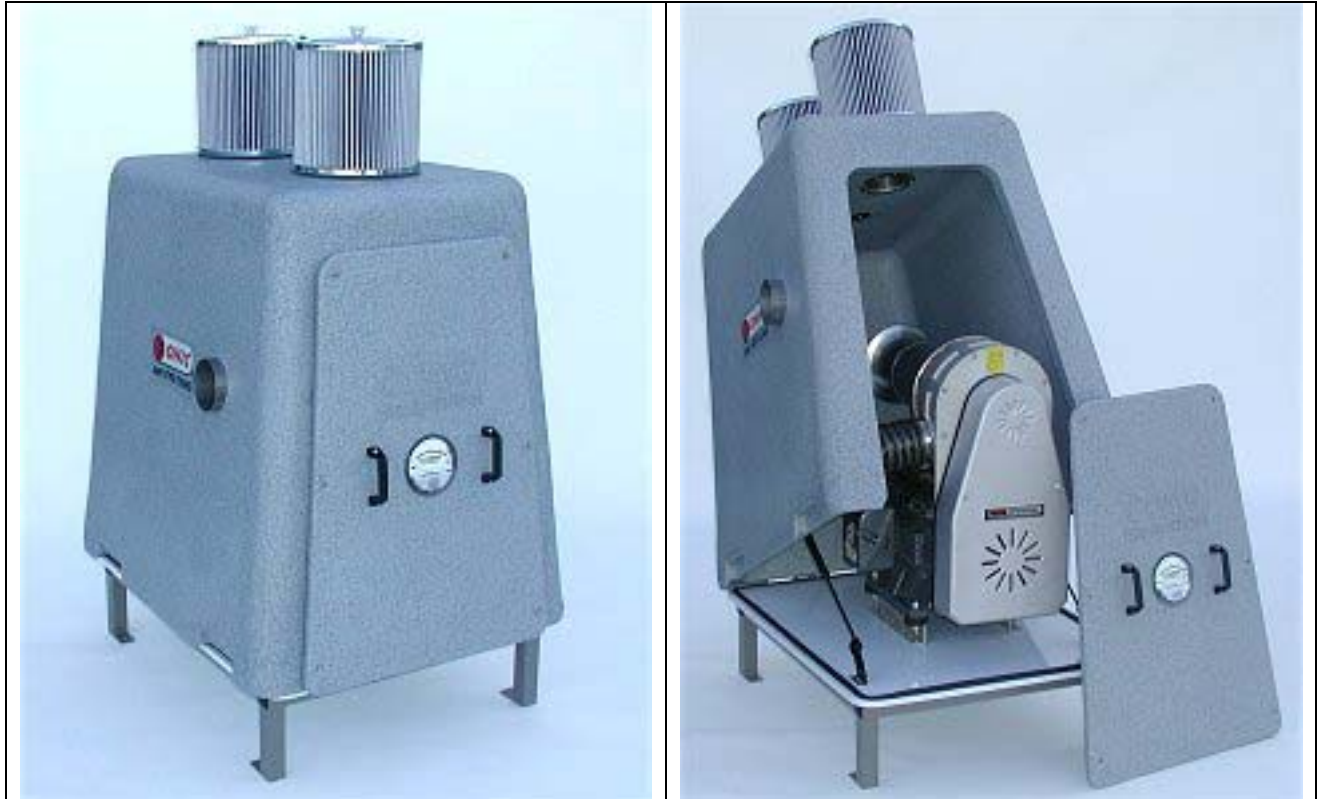


Operation & Maintenance Manual

Sonic AE (All Environment) Blower Enclosure



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1 Introduction

This manual was created to detail the Operation and Maintenance of Sonic Air Systems' AE Blower Enclosure.

2 Safety Instructions

2.1 Electrical

Always use qualified electrical and mechanical personnel for installation and maintenance of Sonic centrifugal blowers and accessories.

No work should be performed on a Sonic blower unit until the power has been turned off and an isolation device has been locked. Disconnect the electrical power at the fuse box or circuit breaker before working on the blower. Double check to be sure that the power is off and that it cannot be turned on while personnel are working on the blower.

2.2 Mechanical

- Keep tools, clothing and hands away from rotating or moving parts while the blower unit is running.
- Observe good safety habits at all times and use care to avoid personal injury or damage to the equipment.

3 General Information

3.1 Information

The Sonic AE Blower Enclosure was designed to reduce the noise level of the blower / motor unit to under 85 db. This enclosure is also designed to protect the blower / motor unit in outdoor and industrial environments (i.e. weather, washdown cleaning, dirt, debris, etc.) and therefore extend the life of the blower.

3.2 Installation Information

1. The Sonic AE Blower Enclosure should be located in normal ambient temperatures ranging from -10°F to 110°F. Although the enclosure material is rated for higher temperature, the blower / motor unit is only rated for 110°F ambient.
2. The filters located on top of the enclosure must be in an area that is free from dirt, debris, and water.
 - a. An optional protective hood can be purchased from Sonic to protect the filters from the elements.
 - b. Paper and Polyester filter elements are available from Sonic.
3. The enclosure should be located in an area to allow for maintenance of the blower / motor unit. Tilting of the cover and access to the door should be considered when positioning the enclosure.
4. The metal frame is powder painted steel standard. Stainless steel bases are available from Sonic.
5. When selecting an installation location allow adequate space for service and maintenance. See *Figures 1 & 2*

6. When selecting an installation location allow adequate space for service and maintenance.

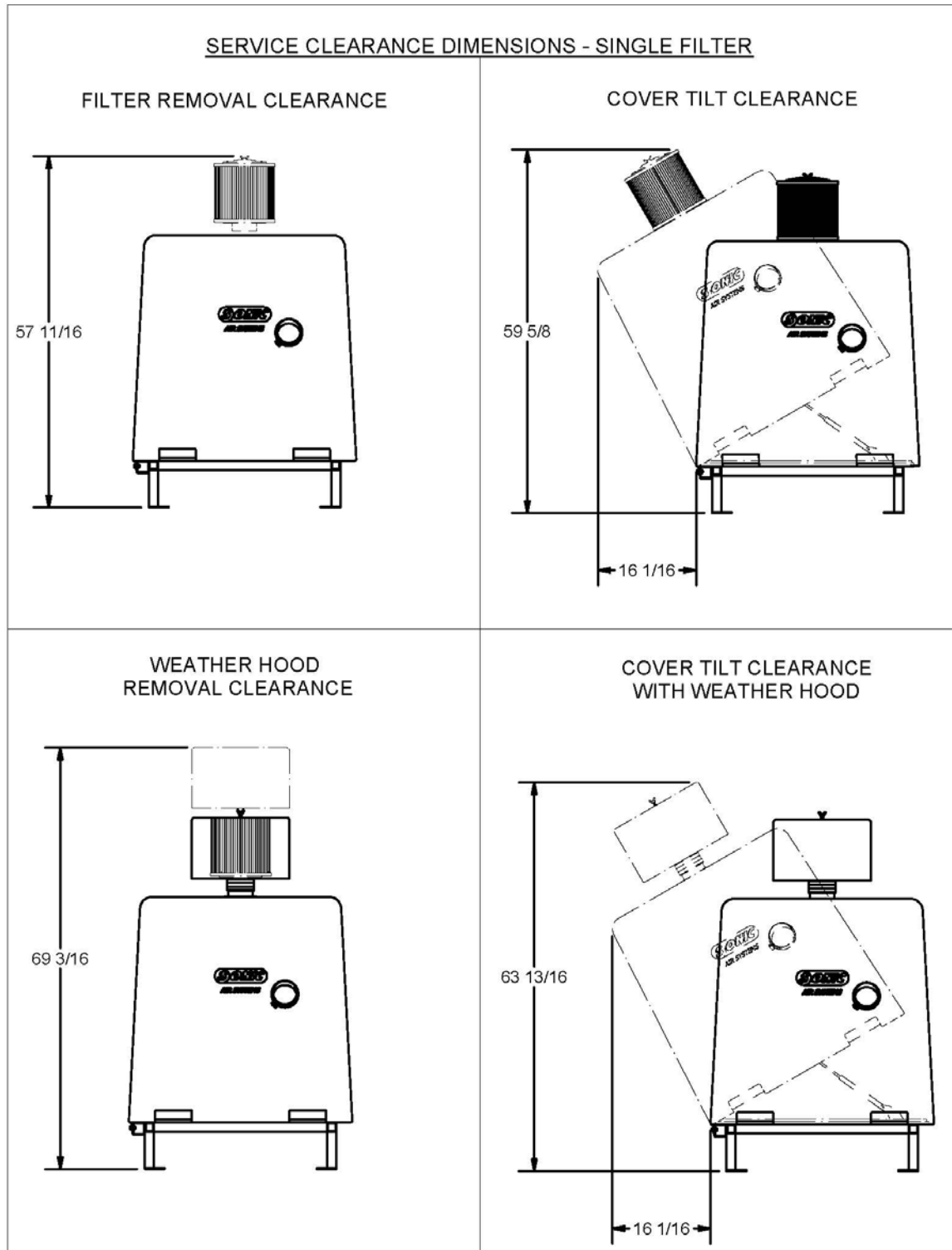


Figure 1

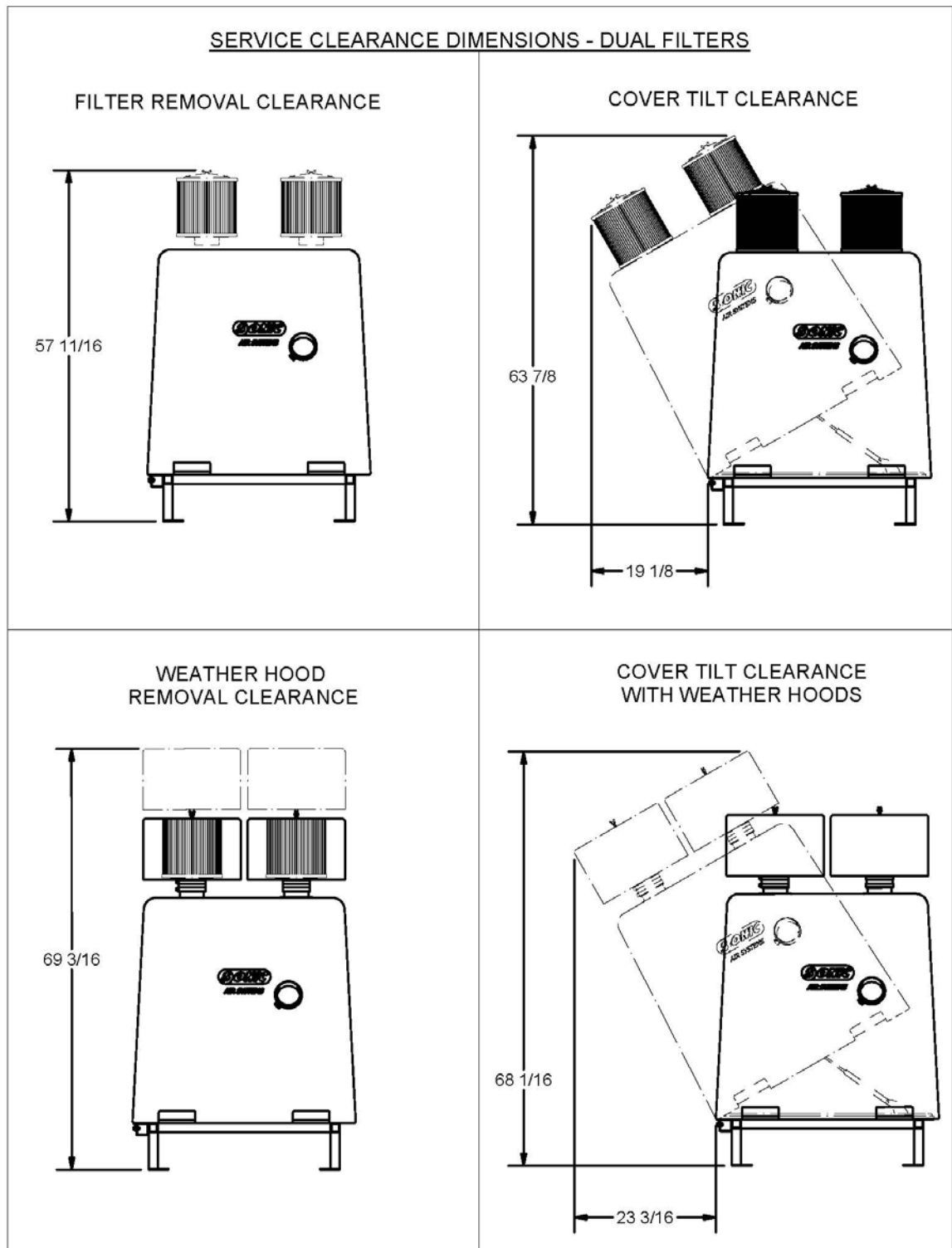
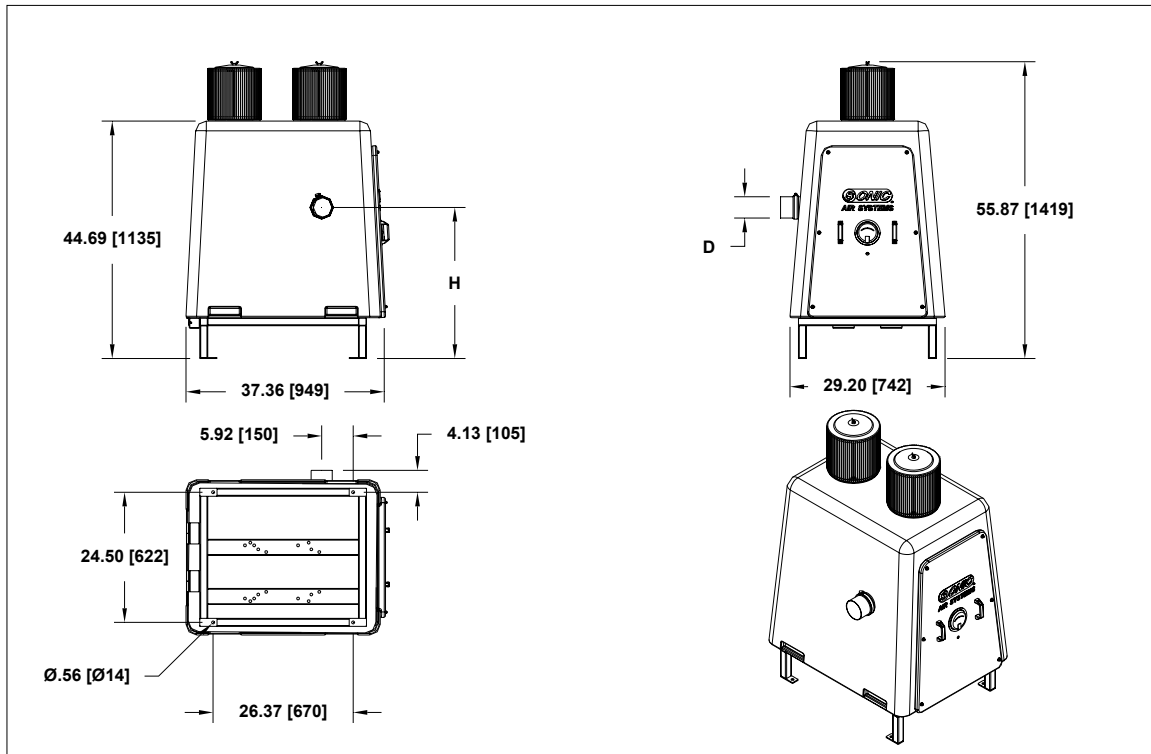


Figure 2

3.3 Enclosure Specification Sheet

Interface Dimensions



Component Specifications

Description	AE Enclosure Sonic 70/85	AE Enclosure Sonic 100 / 150	AE Enclosure Sonic 100 / 150	AE Enclosure Sonic 150
NEMA Motor Frame IEC-B14 Motor Frame	215TC D132C	215TC	256TC D160C	284TSC
Sonic P/N	14511	14512	14513	14514
Material	Molded Cover Powder Painted Steel Base	Molded Cover Powder Painted Steel Base	Molded Cover Powder Painted Steel Base	Molded Cover Powder Painted Steel Base
Noise Level	< 85 db	< 85 db	< 85 db	< 85 db
Outlet Height (H)	24.19 in (615 mm)	25.19 in (640 mm)	26.06 in (662 mm)	29.56 in (751 mm)
Outlet Diameter (D)	3.00 in (77 mm)	4.00 in (102 mm)	4.00 in (102 mm)	4.00 in (102 mm)
Weight	125 lbs 56 (kg)	125 lbs 56 (kg)	125 lbs 56 (kg)	125 lbs 56 (kg)

Number of Filter Elements

- Sonic 70 3-10 HP - 1 filter
- Sonic 85 5-10 HP - 1 filter
- Sonic 85 15 HP - 2 filters
- Sonic 100 15-20 HP - 2 filters
- Sonic 150 15-25 HP - 2 filters

3.4 Enclosure Exploded View

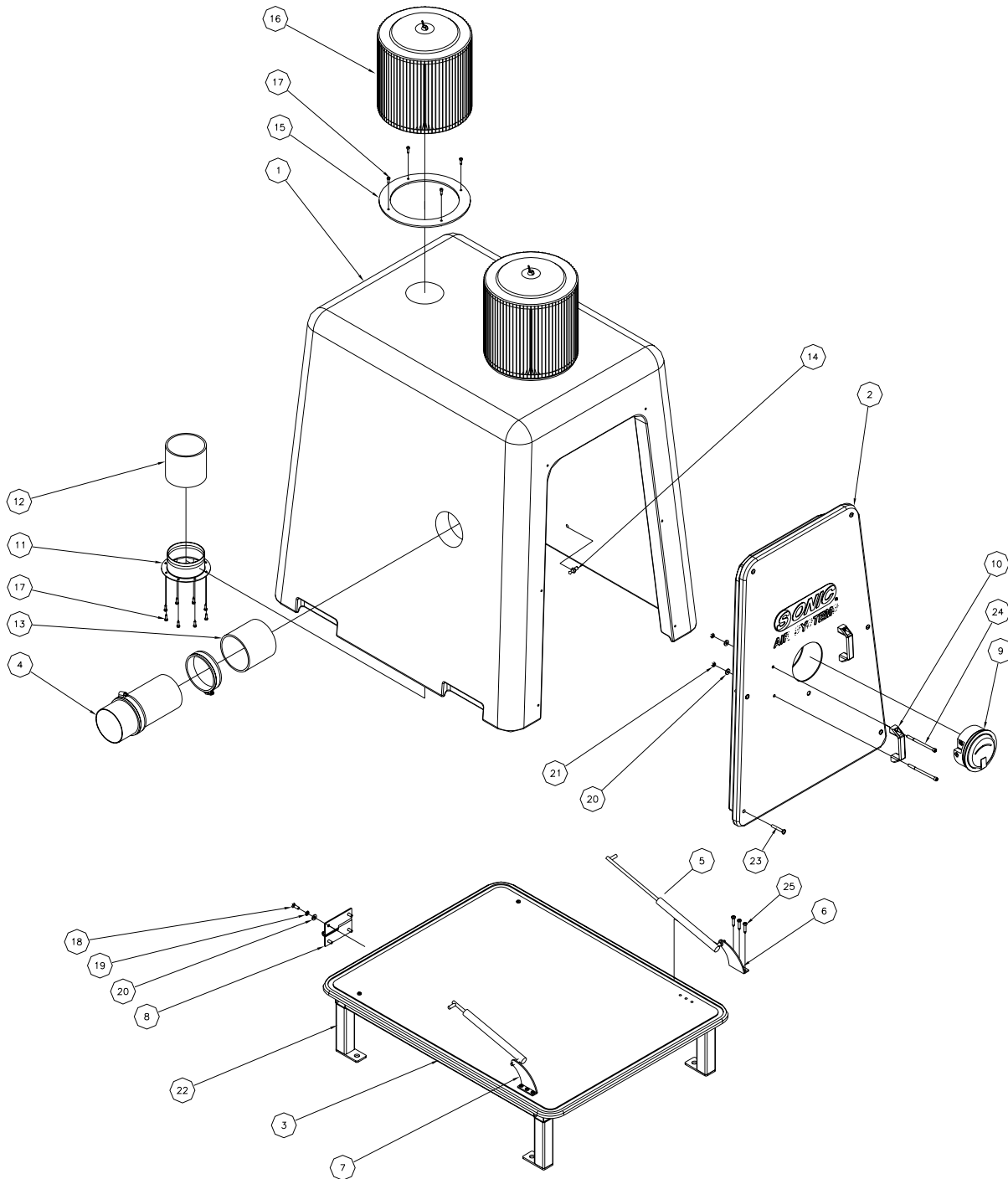


Figure 3 - Exploded Assembly

3.5 Enclosure Parts List

Item No.	Part No.	Description	Qty.	
1	11991	Cover – Enclosure	1	
2	11996	Access Panel - Enclosure	1	
3	14516	Base –Enclosure	1	
4	14523 14524	Outlet – Enclosure	1	
5	14519	Spring – Gas 35 lb	2	
6	14610	Bracket – Gas Spring Left	1	
7	14611	Bracket – Gas Spring Right	1	
8	14518	Hinge	2	
9	10830	Gage – 1” to 20” WC	1	
10	13185	Handle - Enclosure	2	
11	12428	Nipple – 4” Manifold	1	2
12	10435-3.50	Hose – 4” ID Flex Neoprene x 3.50” Lg.	1	2
13a	10434-8.00	Hose -3” ID Flex Neoprene x 8.00” Lg.	1	
13b	10435-5.50	Hose-4” ID Flex Neoprene x 5.50” Lg.	1	
14	14520	Ball – Metal Socket	2	
15	13024	Gasket - Filter	1	2
16	10547	Filter – Paper Element	1	2
17	13246	Screw - #8 x ¾” Lg. Pan Hd Phillips	12	24
18	12066	Screw – ¼-20 x ¾” Lg. Hex Head SS	8	
19	12056	Lock Washer – ¼” SS	8	
20	10006	Washer – ¼” SS	12	
21	10005	Nut – ¼-20 Hex SS	4	
22	14742	Stand – Enclosure Powder Painted Steel	1	
23	14780	Screw – ¼-20 x 1 ¾” Lg. Truss Head	6	
24	14544	Screw – ¼-20 x 4” Lg. SHCS SS	4	
25	13180	Screw – 12-14 x 1 ¼” Self Drilling	8	

4 Operation

4.1 New Enclosure Installation

Although a blower enclosure is typically purchased with a blower / motor unit, an enclosure may be purchased independently and therefore require customer setup. This procedure will detail the necessary instructions to install a blower / motor unit into a blower enclosure.

1. Unpack enclosure and verify all components per the shipping / packing list.
2. Report any discrepancies or deficiencies to Sonic immediately if discovered.
3. Remove the door and carefully set aside.
4. Disengage gas springs from internal brackets. The gas springs are mounted to the metal ball sockets via a snap on connection. Snap off an end of the gas spring to allow access.

Figure 6

5. Tilt the cover to the fully open position.
6. Blower / motor unit must be in rotation 06 position for installation inside a blower enclosure.

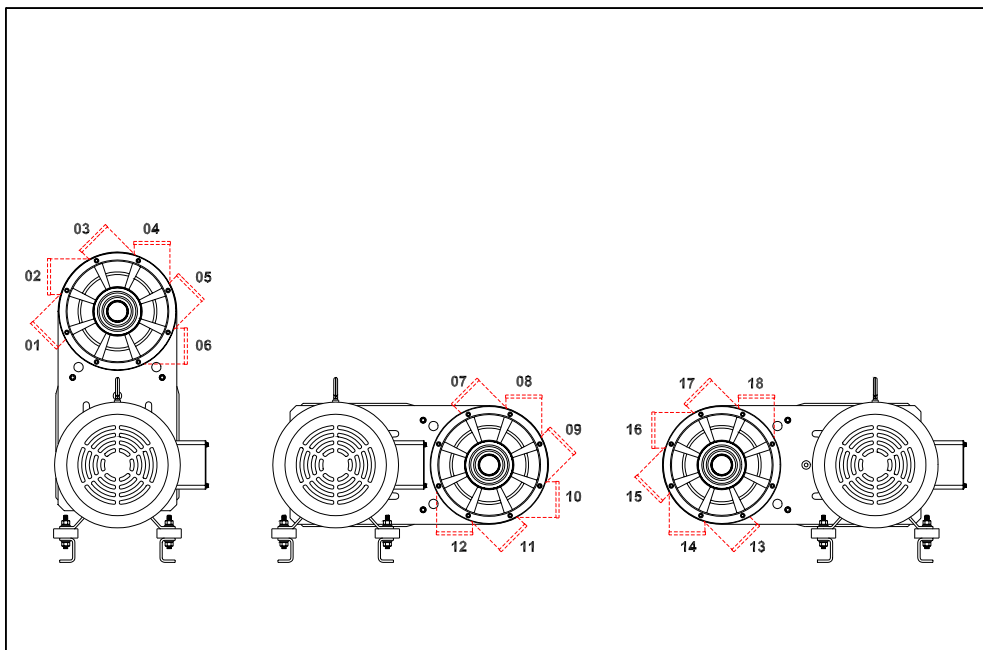


Figure 4 - Blower Rotations

7. Install blower / motor unit onto base. It may be necessary to drill holes in the polypropylene base if not already done so at the factory.
8. A qualified electrician should wire the blower / motor unit using the provided conduit fittings.

9. Tilt the cover to the closed position and reattach the gas springs.
10. Tilt the cover to the open position and connect the flex hose from the outlet of the blower to the outlet tubing provided on the cover. **Warning: Failure to connect the outlet hose may cause blower damage and overheat the enclosure.**

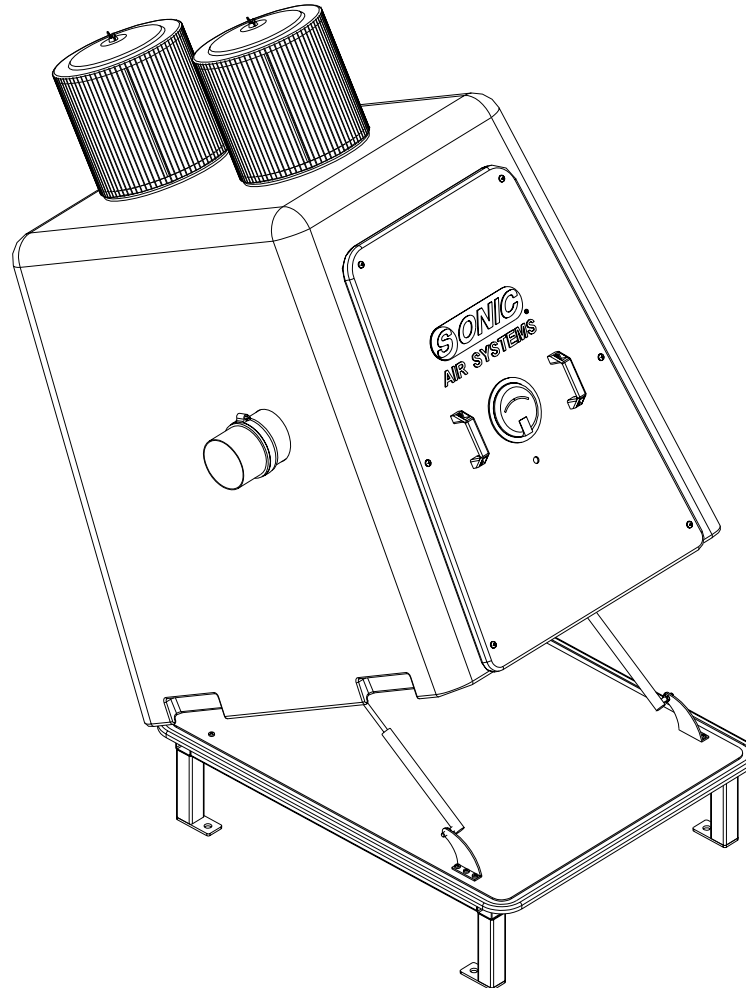


Figure 5 – Blower Enclosure Open Position

11. Tilt cover closed and re-attach access door
12. Reconnect power and unit is ready for operation.

4.2 Periodic Maintenance

A Sonic blower has been designed for many years of trouble free service. Please refer to the Blower Operation & Maintenance Manual for a list of recommended maintenance. **In case a blower / motor unit must be worked on, use the following procedure:**

1. Disconnect and Lock Out power supply to blower

2. Remove access door from enclosure
3. Disconnect the flex hose from the blower outlet to the provided outlet tubing.
4. Disconnect the enclosure outlet tubing from the system piping.
5. Tilt the cover to the open position and perform necessary maintenance.



Figure 6 – Disengage Gas Springs