

AmericanAirFilter[®] DynaPure[®]

Oil Mist Collector

Installation, Operation, and Maintenance Instructions

CAUTION

ROTATION MUST BE CLOCKWISE WHEN LOOKING INTO INLET.

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1.0 Description

The DynaPure[®] filter is designed to remove particles of mist from contaminated air and discharge clean air to the atmosphere. The filter draws in contaminated air and removes the mist by the spinning action of the drum and filter elements. The collected particles are discharged as a liquid through the drain, and the cleaned air is exhausted through the outlet.



2.0 Unpacking

Inspect the shipping carton carefully for damage. If the carton is intact, open it and check the unit for damage. Remove the unit from the carton. Notify your shipping agent if there was any damage during shipment.

3.0 Drain

Sizes larger than A-1 are equipped with a 1" NPT drain connection which may be piped directly to the oil sump, allowing filtered oil to drain into the sump and be reused. If the mist generated contains undesirable elements, it may be collected in any suitable container. Drain should not be trapped, reduced in size, or have an elbow connection at the drain connection.

4.0 Operation

It is recommended that the unit be run continuously during the hours of plant operation as intermittent cycling may cause unnecessary loading of the motor, reducing its service life.

The DynaPure should continue to be operated at least twenty (20) minutes after the machine being exhausted is shut off. This will allow time for the unit to purge itself of oil.

5.0 Installation

5.1 General

Model A-1 must be installed vertically using the threaded inlet opening for mounting. The A-1 drains back through the inlet, eliminating separate drain piping or inlet ducting. On sizes larger than A-1, the base is pre-drilled for mounting. Units should be as close as possible to the point of mist generation. Try to keep the length of hose to a minimum, preferably less than eight feet. Cut the proper length of hose required to connect the inlet of the filter to the outlet of the pickup duct or hood. Avoid excessive sagging which would form a trap. Clamp the hose to the filter and pickup duct or hood, making sure there are no air leaks.

5.2 Prefilter

The optional prefilter is shipped separately to avoid shipping damage. Install as follows:

1. Unlatch and remove the cover of the DynaPure.
2. Install the prefilter housing on the front of the DynaPure where the cover has been and latch in place. **Locate notch in interior baffle at bottom center to allow for drainage path.***
3. Reinstall the cover (to the prefilter housing) and latch in place.

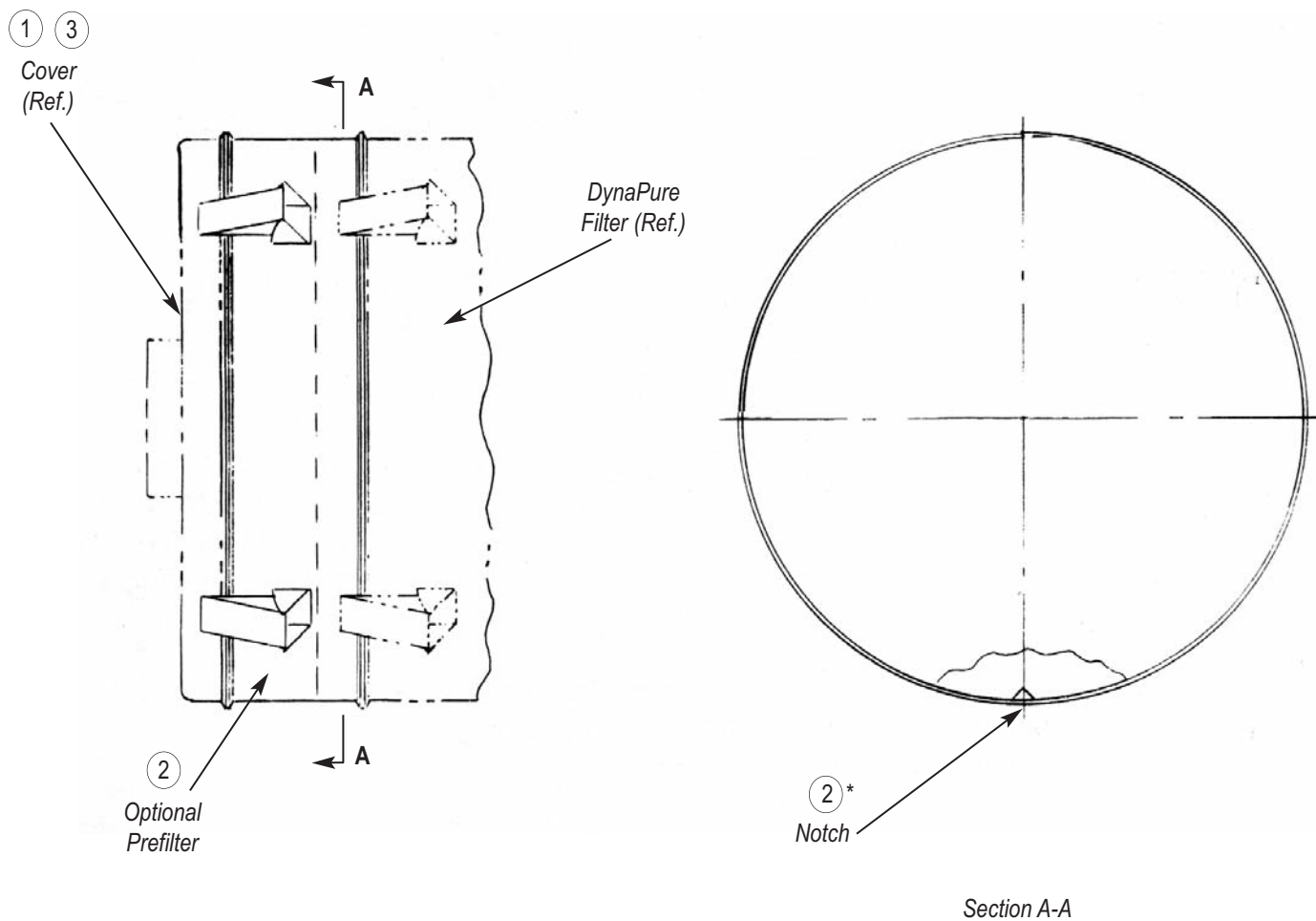


Figure 2. Prefilter Installation

5.3 Final Filter

The optional final filter is shipped separately to avoid shipping damage. Install as follows:

1. Slip the final filter housing over the DynaPure outlet until the top edge of the outlet is approximately even with the break in the sides of the final filter housing.
2. Fasten with the self-drilling screws provided.
3. Seal the joint on the **inside** with the caulk provided.
4. Set the final filter cartridge in the top of the housing and latch in place.

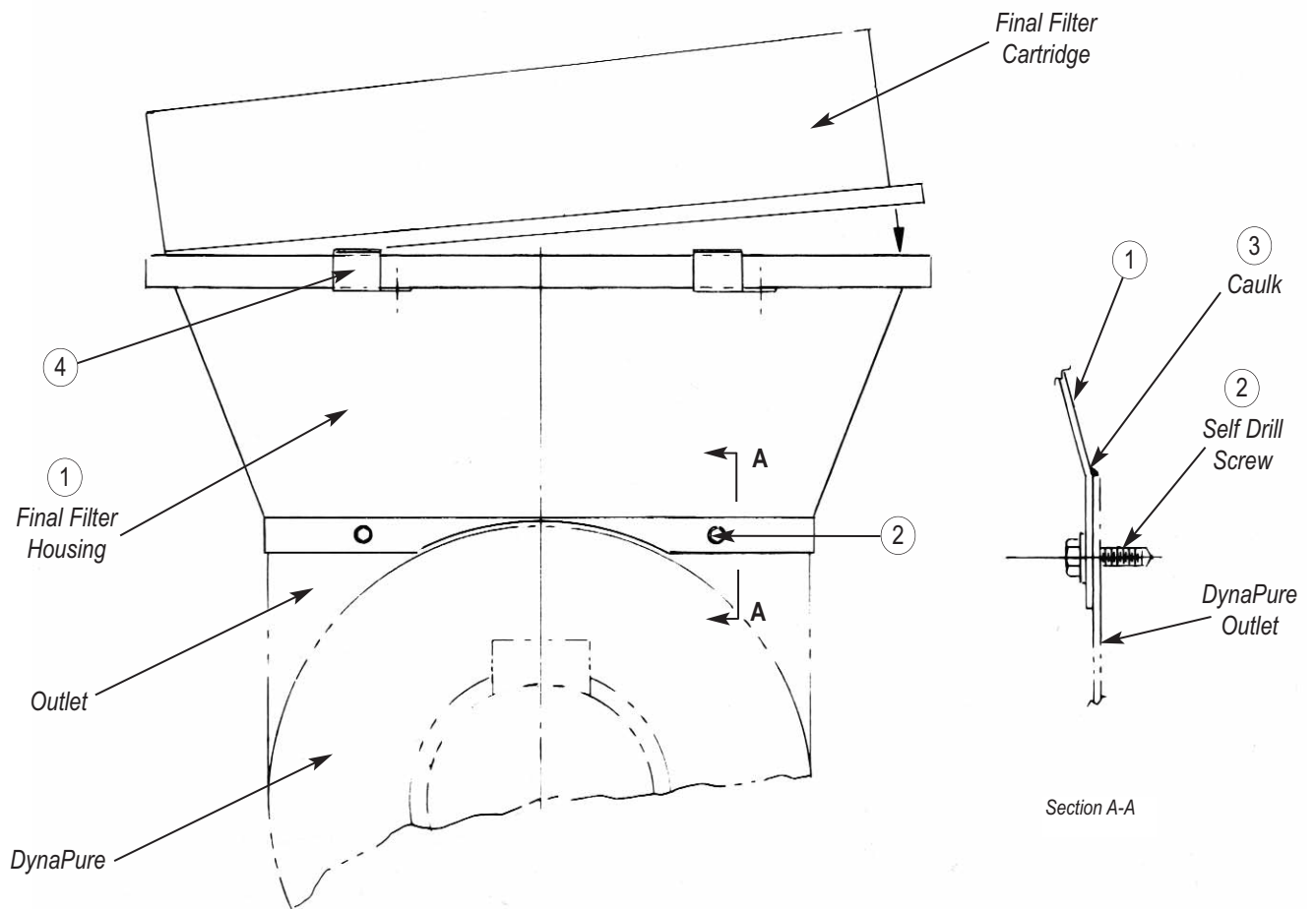


Figure 3. Final Filter Installation

6.0 Maintenance

6.1 General

WARNING: Before attempting any work on a DynaPure unit, disconnect power and check to see that filter drum has stopped rotating. Handle filter drum with care. Balance may be upset if damaged.

Periodically, check hose, hose connection, and drain line for possible leaks. Replacement of filters will depend upon type of material collected and installation. It is suggested a planned maintenance program be established to insure optimum performance.

6.2 Throwaway Liner Replacement - (Figure 4)

1. Turn off power and lock out.
2. Allow drum to stop rotating.
3. Unlatch and remove inlet cover.
4. Remove throwaway liner from drum.
5. Inspect the impeller and remove any buildup that is found on the blades.
6. Replace new throwaway liner inside drum on top of primary filter. Position liner so the seam is opposite the primary filter seam. Allow ends to butt together, do not overlap. Smooth out wrinkles.
7. Replace inlet cover and secure latch.

Mounting Button for Fastening Primary Filter to Drum. One half of buttons to be installed straddling filter seam with remaining buttons installed 180° opposite filter seam for balance.

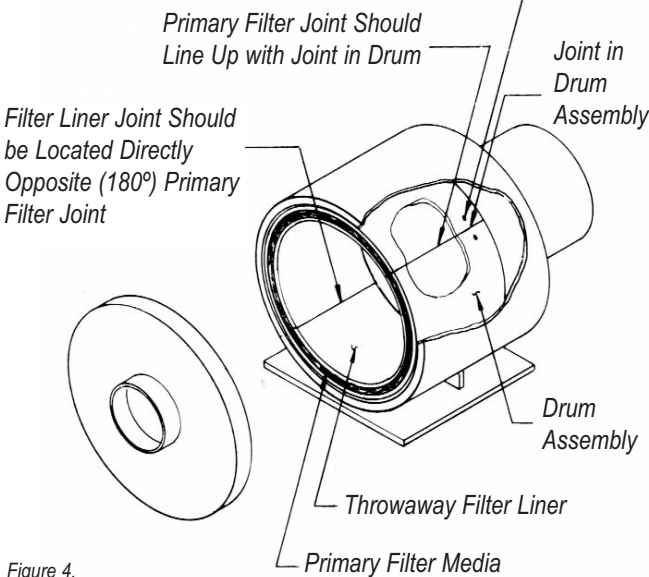


Figure 4.

6.3 Cleaning Procedure - Size A-1 (Figure 6)

1. Turn off power and lock out.
2. Remove bolts holding the motor mounting plate to the housing.
3. Lift out the motor and drum assembly.
4. Remove throwaway line from inside drum.
5. Inspect primary filter in drum. If filter is dirty, proceed with Step 6. If clean, skip to Step 13.
6. Remove screws holding tapered bushing to hub on drum. Reinstall screws in tapped holes in bushing and tighten evenly until bushing is loose. Bushing, drum, key, and key retainer may then be removed.
7. Immerse the drum assembly with the permanent filter intact in kerosene or detergent. Agitate assembly till clean, being careful not to damage drum.

CAUTION: Do not use aromatic hydrocarbon solvents or ketone solvents. Do not use any toxic solvents since toxic vapors may be discharged from residual solvent left in filter when unit is restarted.

8. If possible, spin dry.
9. Remove the hex head screws that mount the motor to the cover which allows removal of the retainer screen and secondary filter. Rinse secondary filter in solvent and wipe screen with a rag. Allow secondary filter to dry.
10. Using a rag soaked with solvent, clean the inside and outside of the casing and the outside of the motor.
11. Replace secondary filter and retainer screen. Remount the motor to the cover.
12. Replace drum, tapered bushing, key, and key retainer on motor shaft. Align end of bushing with end of motor shaft and tighten screws evenly until drum is secured to motor shaft.
13. Place new throwaway liner inside drum on top of primary filter. Position liner so the seam is 180° opposite the primary filter seam. Allow ends to butt together, do not overlap. Smooth out wrinkles.
14. Replace motor and drum assembly in housing.
15. Fasten bolts securely to housing and motor mounting plate.

6.4 Cleaning Procedure - Sizes AS-100 and Larger (Figures 7,8)

1. Turn off power and lock out.
2. Unlatch and remove inlet cover.
3. Remove throwaway filter liner from drum.
4. Inspect primary filter in drum. If filter is dirty, proceed with Step 5. If filter is clean, skip to Step 11.
5. Remove screws holding tapered bushing to hub on drum. Reinstall screws in tapped holes in bushing and tighten evenly until bushing is loose. Bushing, drum, key, and key retainer may then be removed.

CAUTION: Do not use aromatic hydrocarbon or solvents or ketone solvents. Do not use any toxic solvents since toxic vapors may be discharged from residual solvent left in filter when unit is restarted.

6. Immerse drum assembly with the permanent filter intact in kerosene or detergent. Agitate assembly till clean, being careful not to damage drum or impeller blades.
7. If possible, spin dry.
- 8a. For sizes AS-100 through AS-300: Support motor and remove the four (4) hex head screws that mount the motor in place. Pull out retainer screen and secondary filter. Rinse secondary filter in solvent and wipe retainer screen clean. Allow filter to dry.
- 8b. For sizes AS-400 and up: Removes two (2) of the hex screws that mount the motor. This will release the secondary filter retainer and still hold the motor in place. Remove the retainer and pull out the retainer screen, secondary filter and E-Z Kleen. Rinse secondary filter and E-Z Kleen in solvent and wipe retainer and retainer screen. Allow filter to dry.
9. Using a rag soaked with a mild solvent, clean the inside and outside of the casing and the outside of the motor. Check drain to make sure opening is not restricted.
10. Replace the E-Z Kleen (sizes AS-400 and up only), secondary filter, retainer screen, and retainer in this order. Fasten retainer to motor.
11. Replace drum, tapered bushing, key, and key retainer on motor shaft. Align end of bushing with end of motor shaft and tighten screws evenly until drum is secured to motor shaft.

12. Place new throwaway liner inside drum on top of primary filter. Position liner so the seam is 180° opposite the primary filter seam. Allow ends to butt together, do not overlap. Smooth out wrinkles.
13. Replace inlet cover and secure latch.

In some applications where extreme contamination of the permanent filter makes it impossible to clean, the filter should be replaced with a new one smoothing it and butting ends evenly. If unit vibrates, the filter may have to be refitted with the open ends at a different location. When finally located, secure permanent filter with mounting buttons adjacent to the seam and an equal number 180° (opposite) from the seam.

6.5 Motor Replacement - Size A-1 (Figure 6)

1. Turn off power and lock out.
2. Remove bolts holding the motor mounting plate to the housing.
3. Lift out the motor and drum assembly.
4. Remove the screws holding tapered bushing to hub on drum. Reinstall screws in tapped holes in bushing and tighten evenly until bushing is loose. Bushing, drum, key, and key retainer may then be removed.
5. Remove the hex head screws that mount the motor to the cover, and remove the motor.
6. Reassemble in reverse order.
7. Turn on power and check for balance, and to see that no rotating parts are rubbing the housing.

6.6 Motor Replacement - Sizes AS-100 through AS-1000 (Figures 7,8)

1. Turn on power and lock out.
2. Unlatch and remove inlet cover.
3. Remove the screws holding tapered bushing to hub on drum. Reinstall screws in tapped holes in bushing and tighten evenly until bushing is loose. Bushing, drum, key, and key retainer may then be removed.
4. Remove the hex head screws that mount the motor to the housing, and remove the motor.
5. Reassemble in reverse order.
6. Turn on power and check for balance, and to see that no rotating parts are rubbing the housing.

6.7 Prefilter Pad Replacement

1. Unlatch and remove the cover from DynaPure prefilter.
2. Lift out retaining ring assembly.
3. Remove prefilter media and replace with new pad.
4. Set retaining ring assembly back in place.
5. Replace cover and relatch.

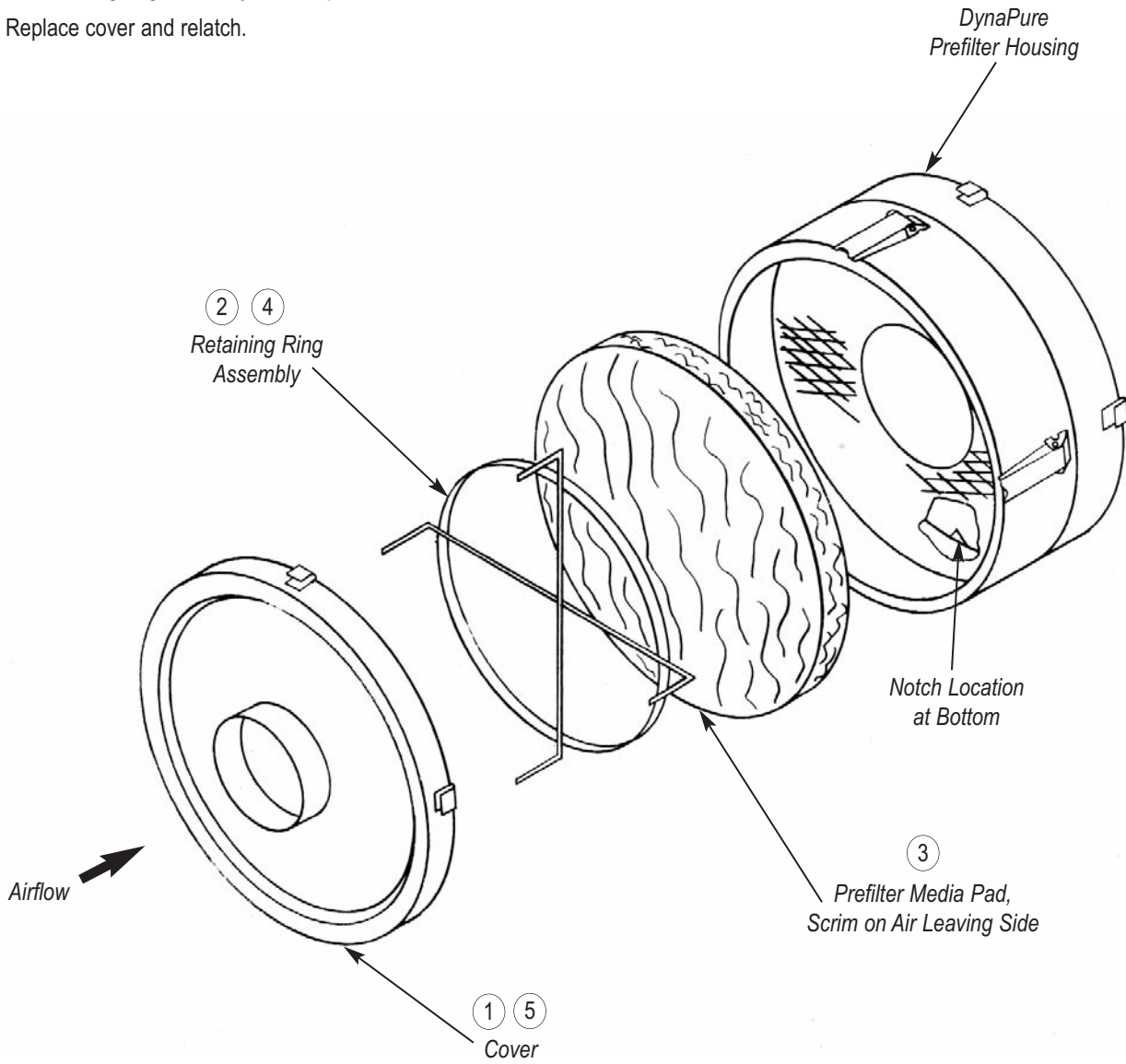


Figure 5. Prefilter Pad Replacement

7.0 DynaPure Parts List

1. Motor
2. Gasket (motor)
3. Casing
4. Cover
5. Filter drum assembly
6. Filter drum
7. Primary filter
8. Throwaway filter liner
9. Snap-in mounting button
10. Retainer screen
11. Secondary filter media
12. Gasket (casing)
13. Bushing
14. Key retainer
15. Shaft key $\frac{3}{16} \times \frac{3}{4}$
16. Hex head bolt $\frac{1}{4} - 20 \times 1\frac{1}{16}$
17. Spring lockwasher $\frac{1}{4}$
18. Hex nut $\frac{1}{4} - 20$
19. Hex head screw $\frac{3}{8} - 16 \frac{7}{8}$
20. Plain washer $\frac{3}{8}$

Note: Item 5—Filter drum assembly consists of items 6, 7, 8, and 9 which can be ordered individually.

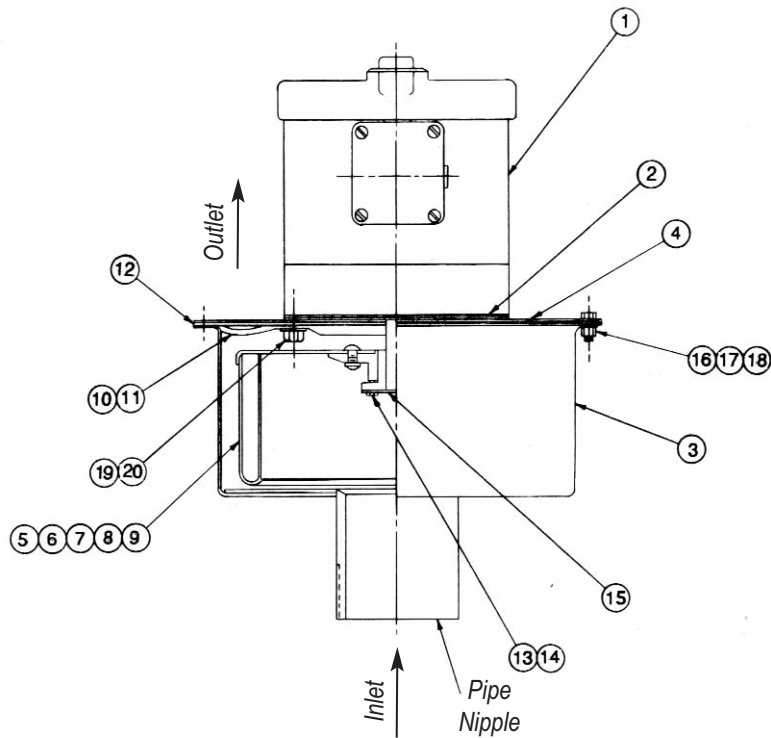


Figure 6. Size A-1

1. Motor
2. Gasket (motor)
3. Casing
4. Cover
5. Filter drum assembly
6. Filter drum
7. Primary filter
8. Throwaway filter liner
9. Snap-in mounting button
10. Retainer screen
11. Secondary filter media
12. Gasket (D strip)
13. Bushing
14. Key retainer
15. Shaft key $\frac{3}{16} \times \frac{3}{4}$
16. Hex head screw $\frac{3}{8} - 16 \times \frac{7}{8}$
17. Plain washer $\frac{3}{8}$

Note: Item 5—Filter drum assembly consists of items 6, 7, 8, and 9 which can be ordered individually.

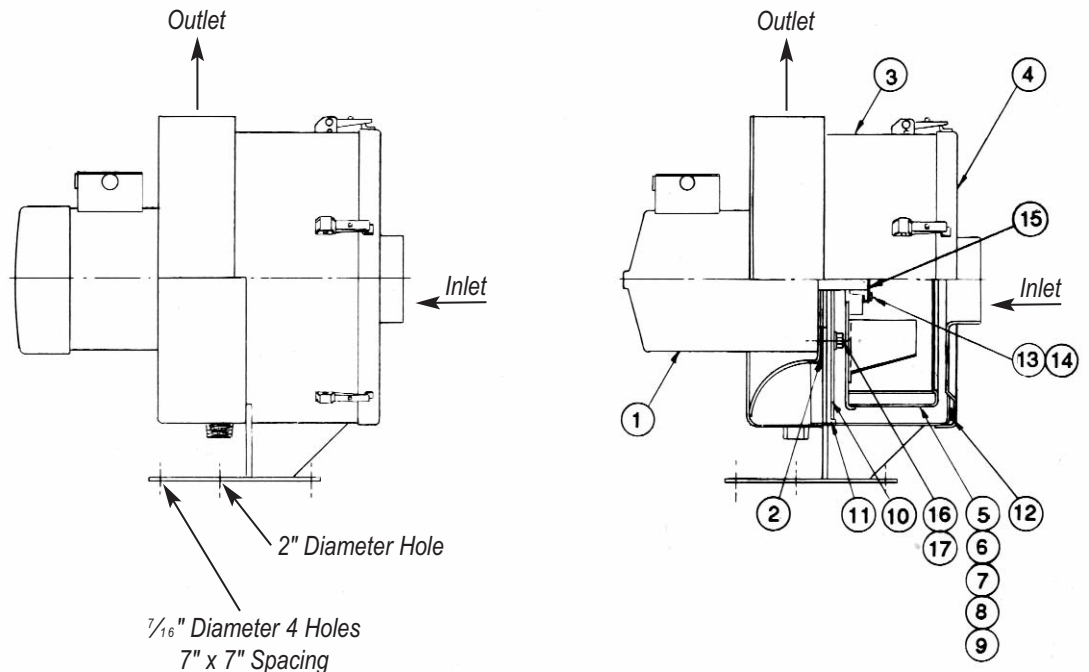


Figure 7. Sizes AS-100 through AS-300

AmericanAirFilter®

DynaPure®

1. Motor
2. Gasket (motor)
3. Casing
4. Cover
5. Filter drum assembly
6. Filter drum
7. Primary filter
8. Throwaway filter liner
9. Snap-in mounting button
10. Retainer screen
11. Secondary filter media
12. Gasket ('O' Ring)
13. Bushing
14. Key retainer
15. Shaft key $\frac{3}{16} \times \frac{3}{4}$
16. Hex head screw $\frac{3}{8} - 16 \times 1\frac{1}{4}$
17. Plain washer $\frac{3}{8}$
18. Grommet
19. Sleeve
20. Secondary filter (E-Z Kleen)
21. Pedestal

Note: Item 5—Filter drum assembly consists of items 6, 7, 8, and 9 which can be ordered individually.

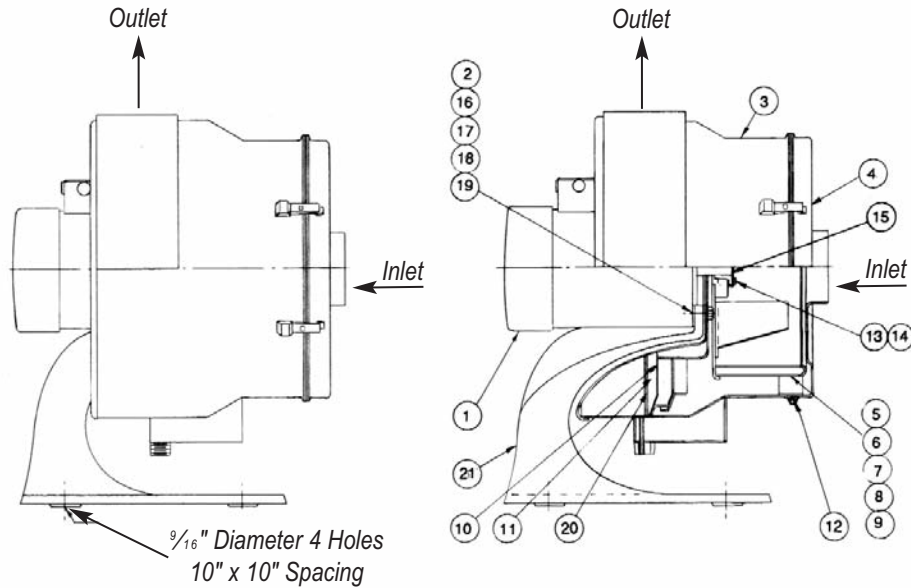


Figure 8. Sizes AS-400, AS-600, AS-800, and AS-1000

DynaPure Size	Item 1 Std. Motor	Item 5 Filter Drum Assembly	Item 7 Primary Filter	Item 8 Throwaway Filter Liner
A-1	268-1544832-1	268-1544840-1	268-143834-1	268-145367-1
AS-100	268-1544832-1	268-1544840-8	268-143834-2	268-145367-2
AS-200	268-1544832-1	268-1544840-2	268-143834-2	268-145367-2
AS-300	268-1544832-7	268-1544840-4	268-143834-2	268-145367-2
AS-400	268-1544832-7	268-1544840-9	268-143834-4	268-145367-4
AS-600	268-1544832-7	268-1544840-5	268-143834-4	268-145367-4
AS-800	268-1544832-11	268-1544840-6	268-143834-5	268-145367-5
AS-1000	268-1544832-11	268-1544840-7	268-143834-5	268-145367-5

DynaPure Size	Item 10 Retaining Screen for Secondary Filter	Item 11 Secondary Filter Media	Item 20 E-Z Kleen Filter
A-1	268-1002476-1	268-1002468-1	
AS-100	268-1002476-2	268-1002468-2	
AS-200	268-1002476-2	268-1002468-2	
AS-300	268-1002476-2	268-1002468-2	
AS-400	268-1002476-8	268-1002468-8	268-157677-1
AS-600	268-1002476-8	268-1002468-8	268-157677-1
AS-800	268-1002476-9	268-1002468-9	268-157677-2
AS-1000	268-1002476-9	268-1002468-9	268-157677-2

DynaPure Size	Optional Prefilter Media Pad
AS-100, AS-200, AS-300	268-1545003-1
AS-400, AS-600	268-1545003-2
AS-800, AS-1000	268-1545003-3

Optional Final Filter Cartridge		
80-85% Efficiency	90-95% Efficiency	HEPA
105-899765-149	105-1121946-149	99.97% DOP
Nominal Size 12 x 24 x 6	Nominal Size 12 x 24 x 6	105-1564848-1
		Nominal Size 12 x 24 x 6

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