



# **AEROEX Technologies Inc.**

## **Oil Mist Eliminator**

Model ROX-800 / 1100

## **Installation & Service Manual**



[www.aeroex.ca](http://www.aeroex.ca)

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## Model ROX-800 / 1100 Specifications

### **AEROEX – Mist Eliminator**

For highly effective separation of oils, emulsion, water. Designed to exhaust air from metalworking machinery and oil reservoirs. Aerosol measurements less than 0.020 mg/m<sup>3</sup> at 0.3 microns.

### Consisting of:

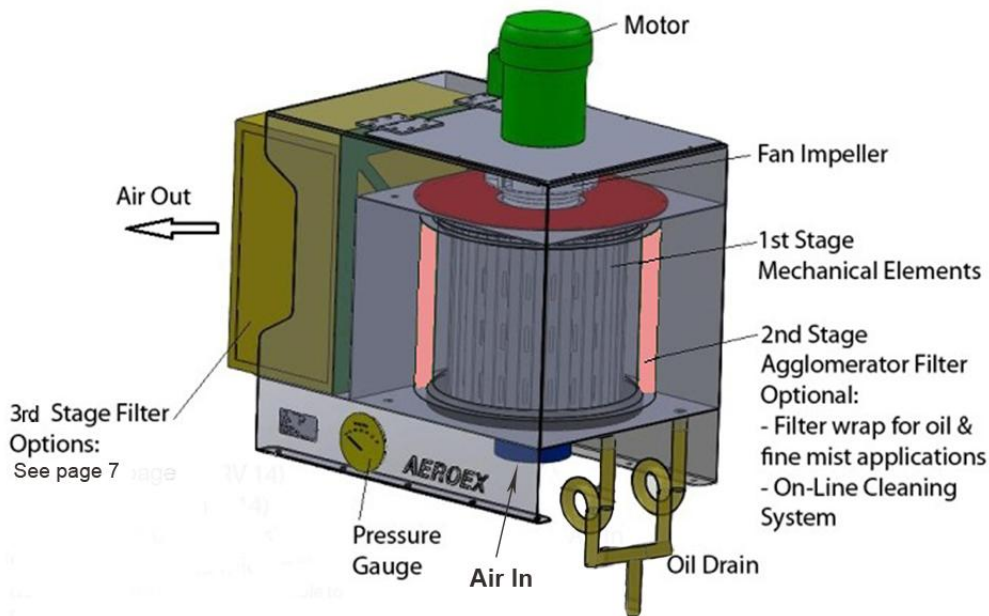
- Powdered coated mild steel housing.
- Motor and fan impeller
- First stage mechanical separator elements.
- Second stage filtration by droplet agglomerator. (Depth Fiber Filter)
- 3<sup>rd</sup> stage filter (HEPA)
- Optional On-Line Cleaning System.

### Specifications:

Model	CFM (m <sup>3</sup> /hr)	Sound dB(A)	Machine Tool Enclosure Volume ft <sup>3</sup>	Motor hp	Voltage	Amps	RPM
ROX-800	700 - 850 (1200 - 1450)	75	150 - 250	1	230/460 575/3/60	2.96/1.48 1.18	3450
ROX-1100	500 - 650 (850 - 1100)	77	200 - 350	2	230/460/3 575/3/60	5.28/2.64 2.11	3450

Model	Dimensions	Weight	Duct Con.
ROX-800	40" x 25" x 44"ht (1016 x 635 x 1117 mm)	350 lb (150 kg)	8" (203 mm)
ROX-1100	40" x 25" x 44"ht (1016 x 635 x 1117 mm)	350 lb (150 kg)	8" (203 mm)

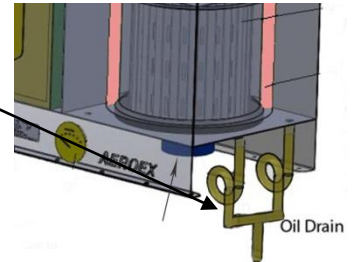
### Description:



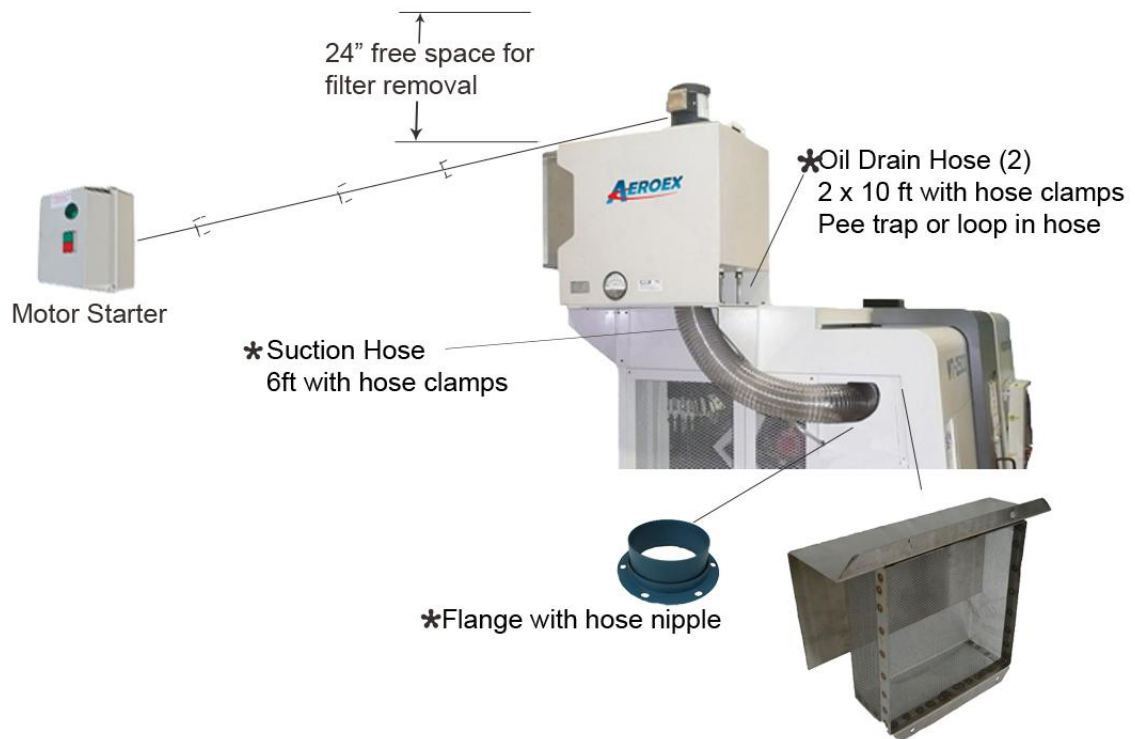


## Installation:

- Mount mist collector level.
- Units can be mounted directly on top of machines, on a post or on the wall.
- Ensure that there is 24" free space above to open lid and remove filters.
- Minimize the length of ducting to avoid air flow losses.
- Metal ducting or flexible hose can be used.
- Do not locate suction intake on machining applications in direct line of the cutting spray.
- A chip strainer mounted in the machine (CNC) enclosure is recommended.
- Connect the 2 oil drain lines using a pee trap (5") or loop in hose.
- Connect into 1 hose after pee trap.
- Install motor starter and set overloads.
- Connect electrical power to motor using a flexible cable.
- Check motor rotation.



## Typical installation:



### Installation Options:

- \*Installation kit
- Motor starter control panel.
- Floor mount stand
- Wall mount stand

- \*Chip Strainer with baffle deflector
- Mount in machine tool enclosure
- 12" x 10" x 5"



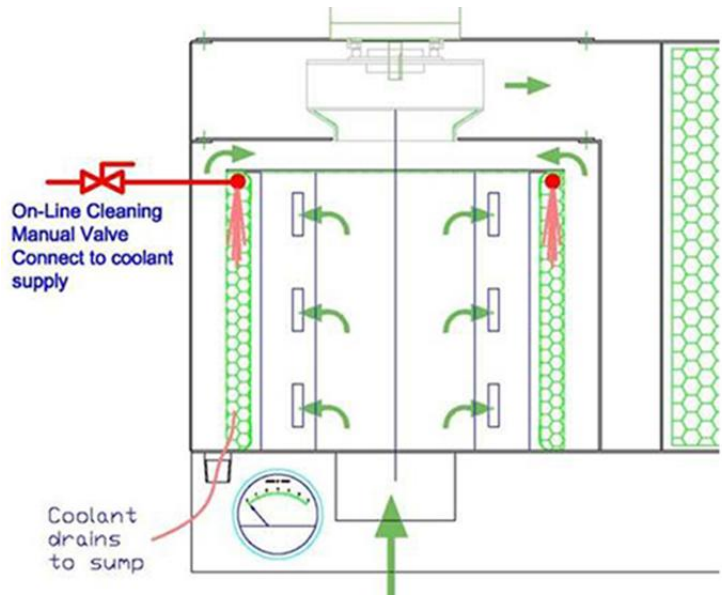
## Maintenance:

The mist collector can operate for long periods without maintenance. The maintenance period will depend on the type of oil & solids/chips in air stream. Some soluble oil & synthetic concentrates will congeal requiring the mechanical separator elements and agglomerator filter media to be manually cleaned/washed. The air flow will reduce if this happens.

Inspect the unit after 3 months, 6 months & 1 year to establish the maintenance interval. If there is no fouling, the mist separator can run indefinitely without maintenance. It is recommended that the 2<sup>nd</sup> stage agglomerator filter media be replaced every 10 years.

### Optional On-Line Cleaning System:

Eliminates manual cleaning of 2<sup>nd</sup> stage media.  
For coolant applications only.  
Connect to water or clean coolant.  
Turn fan motor off.  
Flush for 5-15 min every 2– 4 months.


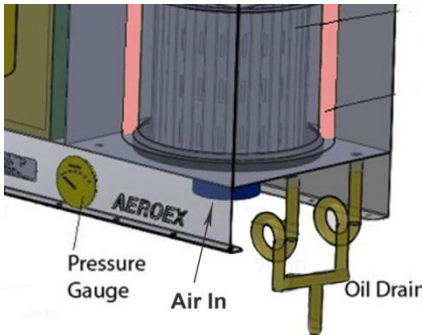



HEPA filter replacement:  
Replace when magnehelic pressure gauge reaches 3" wg.










## Disassembly:

<p>Disconnect and lock-out electrical power.</p> <p>Remove bolts (4) on hinged lid.</p> <p>Remove the bolts(4) on impeller inlet plate.</p>		
<p>Remove impeller inlet plate.</p> <p>Remove nut (1) on pressure plate and lift out plate.</p>		
<p>Remove 1<sup>st</sup> stage mechanical separation elements. They can be disassembled for cleaning by removal of the bolts (6).</p> <p>Remove 2<sup>nd</sup> stage filter media (agglomerator). This is a permanent media and can be washed many times.</p>		

<p>Replace bottom foam gasket each time HEPA filter is changed.</p>		
<p>Check oil drain line, clean if necessary.</p>		
<p>To remove 3<sup>rd</sup> stage filter (HEPA), loosen straps.</p>		







## Filter Options:

Filter Options	Part Number		Application/Comments
1 <sup>st</sup> stage Mechanical Elements  ROX-800 ROX-1100	800ME-002 1100ME-002		Standard on all units Does not normally need replaced.
2 <sup>nd</sup> stage Agglomerator filter  ROX-800 ROX-1100	800AF-001 1100AF-001		Coolant & oil Standard on all units
2 <sup>nd</sup> stage Agglomerator filter with single filter wrap	800FW-001 1100FW-001		High coolant mist, cast iron, oil Will reduce air flow 100 cfm
2 <sup>nd</sup> stage Agglomerator filter with double filter wrap.	800FW-002 1100FW-002		High oil mist Will reduce air flow 200 cfm.
3 <sup>rd</sup> stage filter One 4" MERV 14 24" x 24" x 4"	2000PF-002		For fine mist to protect HEPA. Suggest using 2 <sup>nd</sup> stage filter wraps.
3 <sup>rd</sup> stage filter HEPA 95% @ 0.3 microns 24" x 24" x 12"	2000HF-002		Captures 100% of mist Captures 80%- 99% smoke
3 <sup>rd</sup> stage filter HEPA 99.97% @ 0.3 microns 24" x 24" x 12"	2000HF-001		Captures 100% of mist Captures 99.9% smoke

Note: same 3<sup>rd</sup> stage filters for 800 and 1100.

## 2<sup>nd</sup> Stage Filter Wrap Instructions

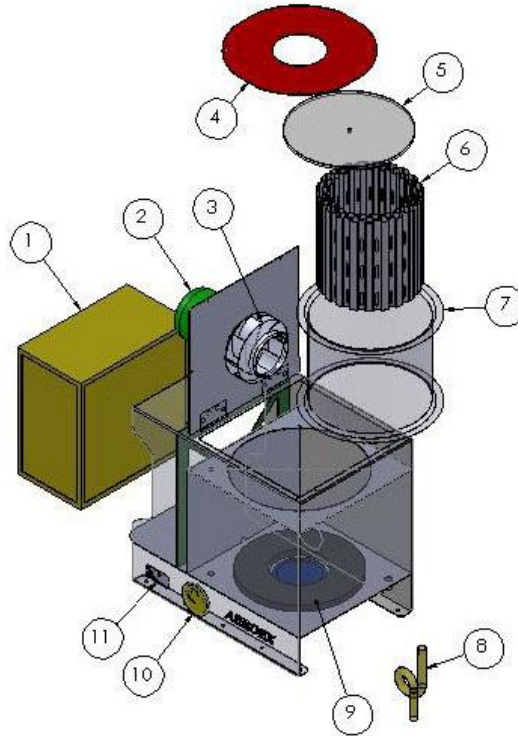
### For oil and other fine mist applications

<p>1<sup>st</sup> stage mechanical element must have 3 elements. Remove outer element if there is 4. Replace existing bolts (6) with 1.5" long bolts.</p>	
<p>Lay wrap on floor or table and roll tightly onto filter. Start at opposite end to the draw string. Approximately 2" will extend on both ends.</p>	
<p>The wrap draw string end must be last to be rolled onto filter.</p>	
<p>Tie draw string at both ends.</p> <p>A foam rubber spacer under mechanical elements could be required to even height between filter and mechanical elements.</p>	

**Notes:**

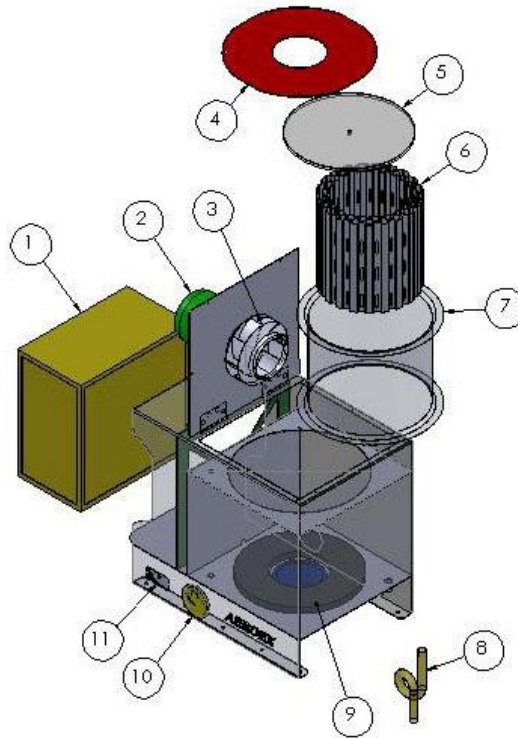
Air flow will be reduced 100 - 200 cfm  
 Single wrap for fine coolant mist, cast iron etc.  
 Double wrap for straight oil applications.

Parts List      Model ROX-800

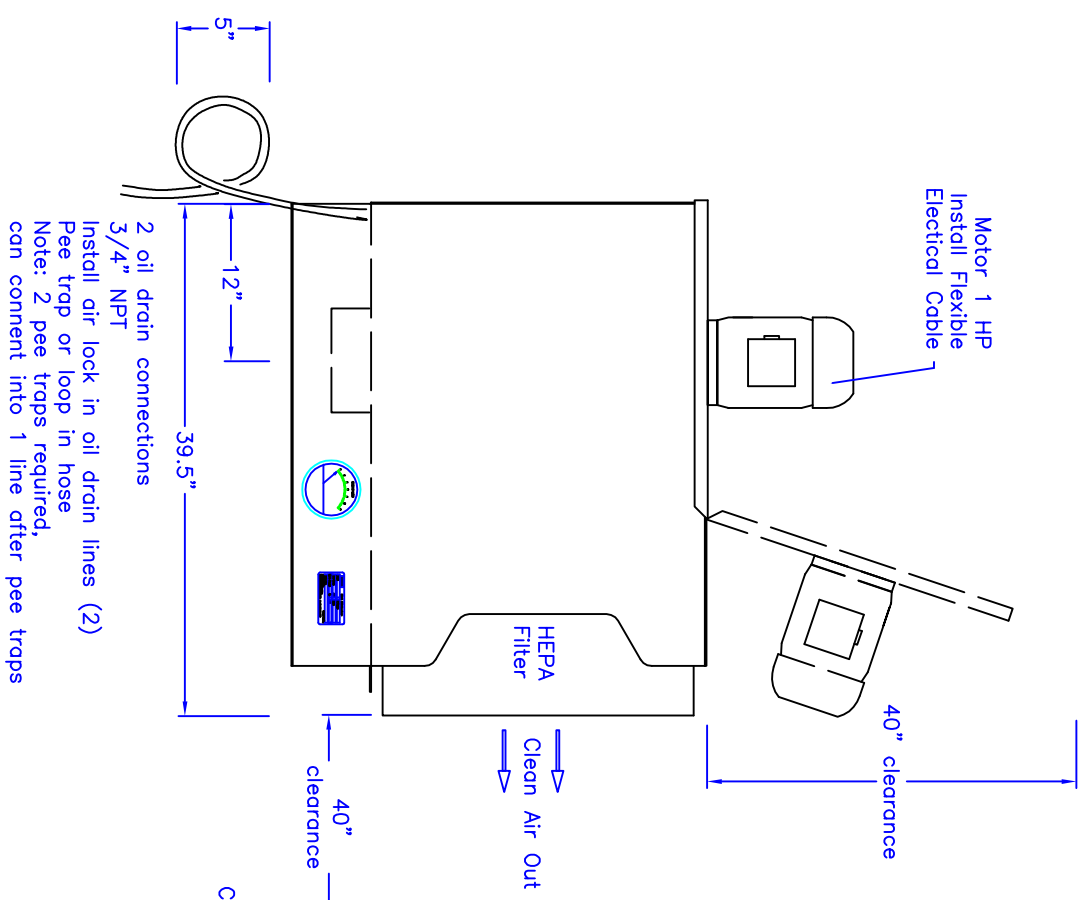


Item #	Description	Qty	Part #
1(a)	HEPA Filter, 12" 95% @ 0.3 um (standard)	1	2000HF-002
1(b)	HEPA Filter, 12" 95% @ 0.3 um (optional)	1	2000HF-001
1(c)	Pre-filter, 4" MERV 14 (optional)	1	2000PF-002
2(a)	Motor 1.0 hp 230/460/3/60	1	800M-230460
2(b)	575/3/60	1	800M-575
3	Fan impeller,	1	800FI-001
4	Impeller inlet plate	1	800FI-001
5(a)	Pressure plate & gasket	1	800PP-001
5(b)	Pressure plate gasket	1	800PPG-001
6	1 <sup>st</sup> stage mechanical elements	1	800ME-001
7(a)	2 <sup>nd</sup> stage agglomerator filter	1	800AF-001
7(b)	2 <sup>nd</sup> stage filter wrap, single (optional)	1	800FW-001
7(c)	2 <sup>nd</sup> stage filter wrap double (optional)	1	800FW-002
8	Drain hose, 2 drains	per foot	800DH-001
9	Bottom rubber gasket	1	800BG-001
10	Magnehelic pressure gauge	1	800MG-001
11	Nameplate	1	n/a
<b>Accessories</b>			
12	Installation kit	1	800IK-001
13	Suction hose, 8"	per foot	800SH-001
14	Flange with hose nipple, 8"	1	800HN-008
15	Hose clamps, 8"	2	800HC-008
16	Chip strainer	1	800SS-001

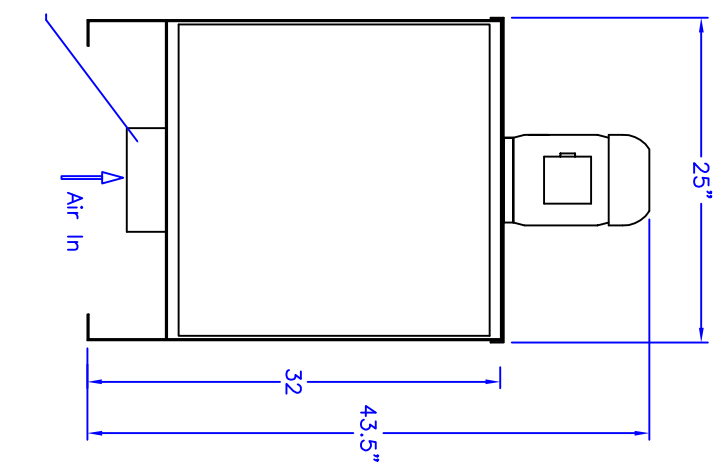
Parts List      Model ROX-1100



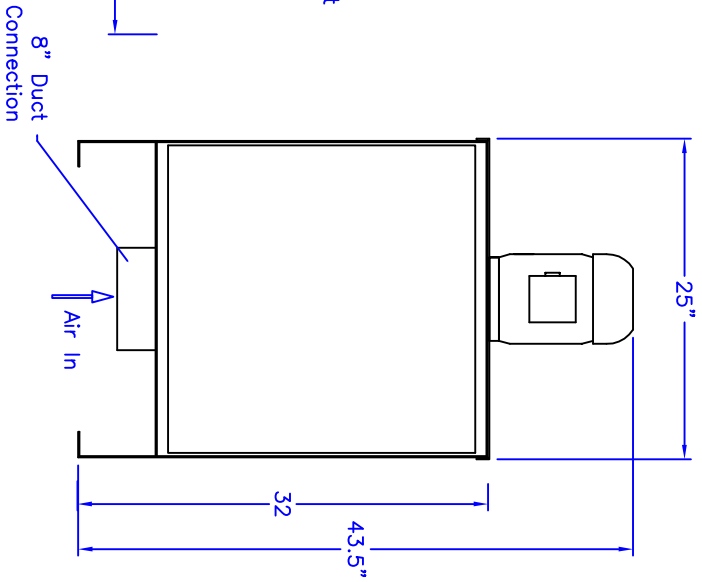
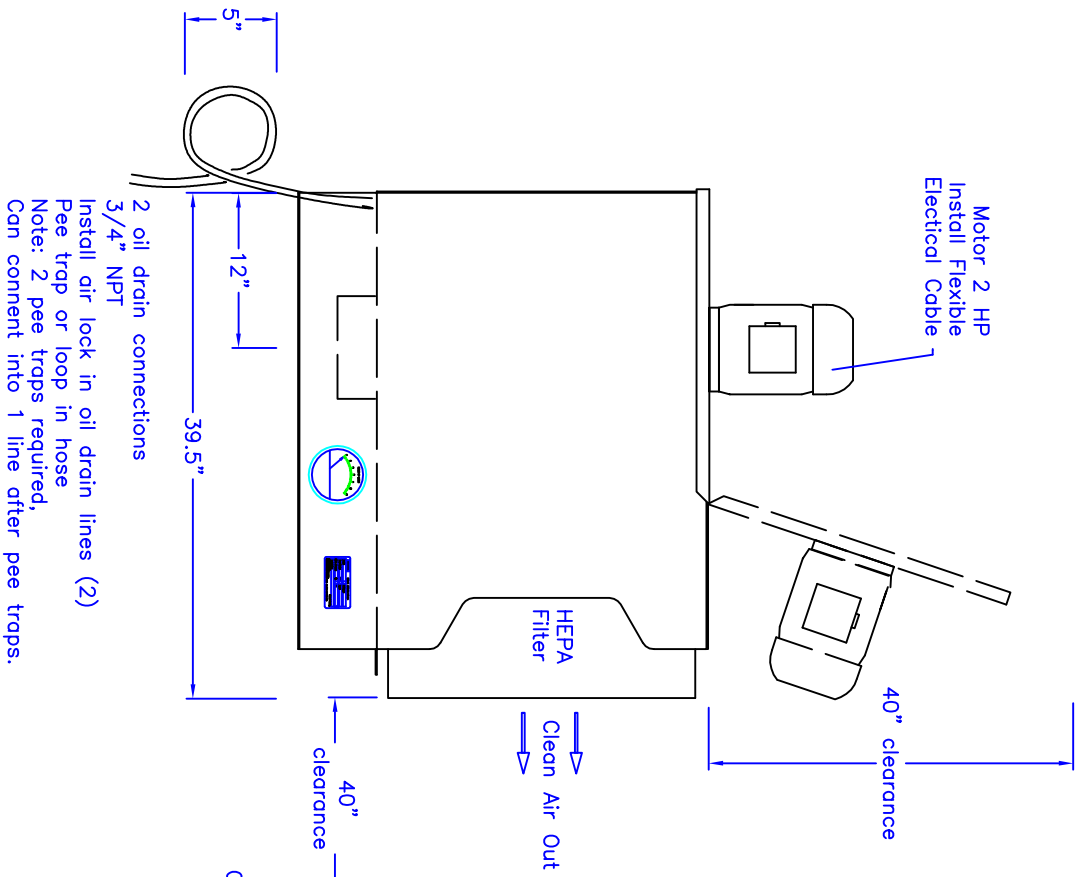
Item #	Description	Qty	Part #
1(a)	HEPA Filter, 12" 95% @ 0.3 um (standard)	1	2000HF-002
1(b)	HEPA Filter, 12" 95% @ 0.3 um (optional)	1	2000HF-001
1(c)	Pre-filter, 4" MERV 14 (optional)	1	2000PF-002
2(a)	Motor 2.0 hp 230/460/3/60	1	1100M-230460
2(b)	575/3/60	1	1100M-575
3	Fan impeller,	1	1100FI-001
4	Impeller inlet plate	1	1100FI-001
5(a)	Pressure plate & gasket	1	1100PP-001
5(b)	Pressure plate gasket	1	1100PPG-001
6	1 <sup>st</sup> stage mechanical elements	1	1100ME-001
7(a)	2 <sup>nd</sup> stage agglomerator filter	1	1100AF-001
7(b)	2 <sup>nd</sup> stage filter wrap, single (optional)	1	1100FW-001
7(c)	2 <sup>nd</sup> stage filter wrap double (optional)	1	1100FW-002
8	Drain hose, 2 drains	per foot	1100DH-001
9	Bottom rubber gasket	1	1100BG-001
10	Magnehelic pressure gauge	1	1100MG-001
11	Nameplate	1	n/a
<b>Accessories</b>			
12	Installation kit	1	1100IK-001
13	Suction hose, 8"	per foot	1100SH-001
14	Flange with hose nipple, 8"	1	1100HN-008
15	Hose clamps. 8"	2	1100HC-008
16	Chip strainer	1	1100SS-001



2 oil drain connections  
3/4" NPT  
Install air lock in oil drain lines (2)  
Pee trap or loop in hose  
Note: 2 pee traps required,  
can comment into 1 line after pee traps



<b>ABROREX Technologies Inc.</b> 80 Mills Drive LAKE 023 North, Orange MA 01364 Fax: (781) 794-0199			
DESCRIPTION: <b>ROX-800 ASSY DRAWING</b>			
DATE:	DESIGN:	SCALE:	DWG NO.:
Dec. 2009	T.B.		A-04-0250-B



<b>AEROEX Technologies Inc.</b> 90 Kille Drive Barrie, Ontario L4R 6Z5 Tel: (705) 794-0100 Fax: (705) 794-1018			
DESCRIPTION: ROX-1100 ASSY DRAWING			
DATE: Dec. 2009	DESIGNER: T.B.	SCALE:	DWG. NUM: A-04-0250-A