



**RB-SERIES  
CENTRIFUGAL BLOWER  
INSTALLATION & OPERATING INSTRUCTIONS  
RB500 • RB800 • RB1200HC  
RB2000 • RB2400 • RB4000 • RB4002**



CE Certification applies only to blower retro kits (motor not included)

OM001 Rev.A



## Republic Centrifugal Blowers

RB500 • RB800 • RB1200HC • RB2000 • RB2400 • RB4000 • RB4002

## Installation & Operating Instructions

Republic Manufacturing®

5131 Cash Road

Dallas, TX 75247

(214) 631-8070

[www.republic-mfg.com](http://www.republic-mfg.com)

[info@republic-mfg.com](mailto:info@republic-mfg.com)

### **Warning**

 Service procedures beyond the scope of this manual should only be performed by trained service personnel at Republic Manufacturing.

### **Important**

Read the following safety instructions carefully. Disconnect blower from electrical source using an approved lockout/tagout procedure before attempting service

## Table of Contents

Safety Instructions .....	5
Lockout/Tagout Procedures .....	6
Blower Description and Model Identification.....	6
Equipment Arrival and Inspection .....	7
Storage Conditions .....	7
Long Term Storage.....	7
Suitability & Environmental Conditions.....	7
Space Required for Installation.....	7
Installation .....	8
Frequency of Inspection .....	8
Specifications and Dimensional Data.....	9
RB500 Dimensions .....	9
RB800 Dimensions .....	10
RB1200HC Dimensions .....	11
RB2000 Dimensions .....	12
RB2400 Dimensions .....	13
RB4000 Dimensions .....	14
RB4002 Dimensions .....	15
RB4000 Pulley Center Distances.....	16
Blower Positions .....	17
Motor Selection Guidelines.....	18
Motor Wiring and Start-Up .....	20
Exploded Parts Drawings .....	21
RB500 Exploded View.....	21
RB800 Exploded View.....	22
RB1200HC Exploded View.....	23
RB2000 Exploded View.....	24
RB2400 Exploded View.....	25
RB4000 Exploded View.....	26
RB4002 Exploded View.....	27
Balanced Bearing Housing Assembly.....	28
Water-Cooled Balanced Bearing Housing Assembly.....	29
Tension Pulley Assembly.....	30



Drive Belt Information.....	31
RB500/RB4000/RB4002 Belt Information.....	31
RB800/1200HC/RB2000 Belt Information.....	32
RB2400 Belt Information.....	33
RB500 Belt Replacement Procedure.....	34
RB800/RB1200HC/RB2000/RB2400 Belt Replacement Procedure.....	35
RB4000/RB4002 Belt Replacement Procedure.....	41
Tension Pulley Replacement Procedure.....	42
Motor Pully Information.....	43
Motor Pulley Installation.....	44
Motor Pulley Removal Procedure.....	45
Air Filter Information.....	48
RB500 Filter Assembly.....	48
RB800/RB1200HC/RB2000/RB2400 Filters.....	49
HEPA Filter Element.....	55
Enclosures.....	56
RB800/1200HC Low Profile Enclosure.....	56
RB800/1200HC High Profile Enclosure.....	57
RB2400 Enclosure.....	58
RB4000 Painted Aluminum Enclosure.....	59
RB4000 Stainless Steel Enclosure.....	60
Leveling Pad Assembly.....	61
Recommended Maintenance Schedule for Republic Blowers.....	62
Filter Maintenance.....	62
HEPA Filter Maintenance.....	62
Enclosure Filter Maintenance.....	62
Bearing Maintenance.....	63
Belt Maintenance.....	63
Motor Pulley and Bushing Maintenance.....	64
Troubleshooting Guidelines.....	66
In the Event of a Breakdown.....	68
When to Ship the Blower Back to Republic.....	68
Disabling, Dismantling, and Scrapping of Blower.....	68
Warranty Terms and Conditions.....	68

# Safety Instructions

1. Always use qualified electrical and mechanical personnel for installation and maintenance of Republic Blowers and motors.



2. Disconnect the electrical power at the motor starter, fuse box or circuit breaker before working on the system. Take special precautions to make sure the power cannot be turned on while you are working on the blower. **Use an approved lockout/tagout system.**



3. Make sure the motor is electrically grounded, the mounting bolts are properly secured, and all guards are in place before start-up.

4. Wear safety glasses and earplugs when working on the blower, air knife or discharge nozzles within a Republic Blower system.



5. **Do not operate blower/motor assembly with the belt guard removed.**
6. Do not operate blower with the outlet open to atmosphere. Connect system piping or butterfly valve to prevent overloading the motor. **Check the final installation for proper amp loads.**
7. Keep all tools, loose clothing and hands away from rotating or moving parts while the unit is running. Never run the blower unit without the belt guard installed.
8. Inspect the blower at regular intervals for damaged or worn parts. **Replace damaged parts immediately! Do not connect or turn on a damaged blower!**
9. Inspect the inlet air filter at regular intervals and replace when necessary. A dirty air filter can cause improper blower performance.
10. Flanged blower housing gasket must be installed. Check for leaks.
11. Ensure blower rotation is correct.
12. Use only genuine Republic Blower brand replacement parts.
13. Refer to Troubleshooting section of manual.
14. Make sure to install the inlet air filter or piping to blower inlet before starting the blower/motor.
15. Water, other liquids, aggressive or inflammable gases and vapors may not be handled. Handling of inflammable or aggressive gases and vapors is only possible with special versions that have not been CE Certified.



## Lockout/Tagout Procedures



1. Notify all affected employees that a lockout or tagout is about to occur on a specific piece of equipment or machinery. The authorized employee to use the lockout/tagout system shall know the type and magnitude of energy that the machine or equipment utilizes and the hazards that exist with the energy source before preparing to shutdown.
2. If the machine or equipment is operating, please use normal stopping or rundown procedures for that machine.
3. Operate the switch, valve, or other energy isolating devices so that the equipment is isolated from its energy source. This may include hydraulic pressure, residual mechanical energy, charged chemical lines, chemical drain lines, compressed gas lines, electricity, and pressurized steam. Isolating the equipment from its energy source may involve turning off such items as the operating control, a line valve, or an electrical circuit breaker.
4. Apply the lockout/tagout isolating device with assigned individual locks or tags.
5. Release any potentially-hazardous stored or residual energy. In order to do so, this may mean to return springs to a normal position, bleeding down, or blocking hydraulic systems. Since the machine must be in a zero energy state, if there is any chance the stored energy may reaccumulate, verification of isolation must be continued until the servicing or maintenance is complete.
6. The machine or equipment is now locked out or tagged out.

## Blower Description and Model Identification

Republic Manufacturing Centrifugal Blowers are industrial grade centrifugal blowers capable of producing high velocity air at low operating costs. Six models are available:

- ▲ RB500: Compact Model with or without Motor. 3-7.5 HP (2.2 kW- 5.6 kW) Motor Sizes
- ▲ RB800: Compact Model with or without Motor. 3-10 HP (2.2 kW- 7.5 kW) Motor Sizes
- ▲ RB1200HC: Standard Model with or without Motor. 5-25 HP (3.7 kW-18.6 kW) Motor Sizes
- ▲ RB2000: Standard Model with or without Motor. 20-40 HP (14.9 kW- 29.8 kW) Motor Sizes
- ▲ RB2400: Dual Headed Model with or without Motor. 20-50 HP (14.9 kW- 37.2 kW) Motor Sizes
- ▲ RB4000: Standard Model with or without Motor. 40-75 HP (29.8 kW- 56.0 kW) Motor Sizes
- ▲ RB4002: Standard Model with or without Motor. 40-75 HP (29.8 kW- 56.0 kW) Motor Sizes

Republic Blowers have a nameplate containing the serial and model number located on the blower head near the exhaust port. The motor manufacturer's nameplate is located on the motor. When placing a service call, please provide the Republic serial number. Call us at (800) 847-0380 or e-mail [info@republic-mfg.com](mailto:info@republic-mfg.com).

- ▲ Models come with 2.5 inch (63.5 mm) or 4 inch (101.60 mm) vacuum ports, 3 inch (76.200 mm), 4 inch (101.60 mm), or 6 inch (152.4 mm) exhaust ports, and can accommodate 3 inch (76.200 mm), 4 inch (101.60 mm), or 6 inch (152.44 mm) ID hose connections.
- ▲ All models come with mounting brackets and rubber vibration isolators.
- ▲ All models have blower housings that can be rotated to almost any position with ease.
- ▲ All models are capable of converting over to water-cooled systems (with optional purchased parts).

## Equipment Arrival and Inspection

Inspect the blower system at time of receipt to ensure that all components and accessories, as noted on the packing slip, were received and in good condition. Verify that the serial number on the packing slip matches the serial number shown on the blower head nameplate. Inspect the blower and motor assembly to ensure that the motor horsepower and voltage are correct.

## Storage Conditions

1. Must store blower in a clean, dry place
2. The temperature during storage must be between  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) and  $40^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ).
3. Rotate the bearing housing assembly at least  $45^{\circ}$  every three weeks during storage to prevent the bearings from seating in the outer race.

## Long Term Storage

Bearing housing assembly storage should not exceed twelve (12) months. The shaft of the bearing assembly must be in the horizontal position during this period. If the unit is stored over twelve (12) months, please contact Republic Manufacturing at (800) 847-0380.

## Suitability & Environmental Conditions

-  The units are suitable for the use in the industrial field.
-  Amounts of water vapor may be handled. Water, other liquids, aggressive or inflammable gases and vapors may not be handled. Handling of inflammable or aggressive gases and vapors is only possible with special versions.
-  The ambient and suction temperatures must be between  $5^{\circ}\text{F}$  ( $15^{\circ}\text{C}$ ) and  $104^{\circ}\text{F}$  ( $40^{\circ}\text{C}$ ). For units utilizing a water-cooled bearing housing assembly, the maximum inlet temperature is  $350^{\circ}\text{F}$  ( $176^{\circ}\text{C}$ ). For temperatures outside this range please contact your supplier.
-  In all applications where an unplanned shut down of the blower could possibly cause harm to persons or installations, a corresponding safety backup system must be installed.

**If any equipment was damaged in transit, you will need to make a claim against the freight carrier immediately.**

If you have any shortages, discrepancies, or damage, please call your Republic Manufacturing Distributor or Republic Manufacturing at (800) 847-0380. No training required.

## Space Required for Installation

1. Allow at least 8 inches (203 mm) to 10 inches (254 mm) of clearance for removal and venting at the belt guard.
2. Allow at least 2 inches (50 mm) to 3 inches (76 mm) of clearance around the rest of the blower for cooling.
3. Please refer to the blower dimensional drawings to determine the appropriate machine footprint.



## Installation

Lift the blower system by the lifting eye mounted on the top of the motor or by picking the blower up from underneath the motor. Do not lift the blower by the belt guard. Vibration isolators are included with every blower. Bolt your Republic Blower in place by the mounting brackets supplied with the blower. Use a minimum of four (4) mounting bolts. See the Specifications Section of the manual for equipment weights. No training required.

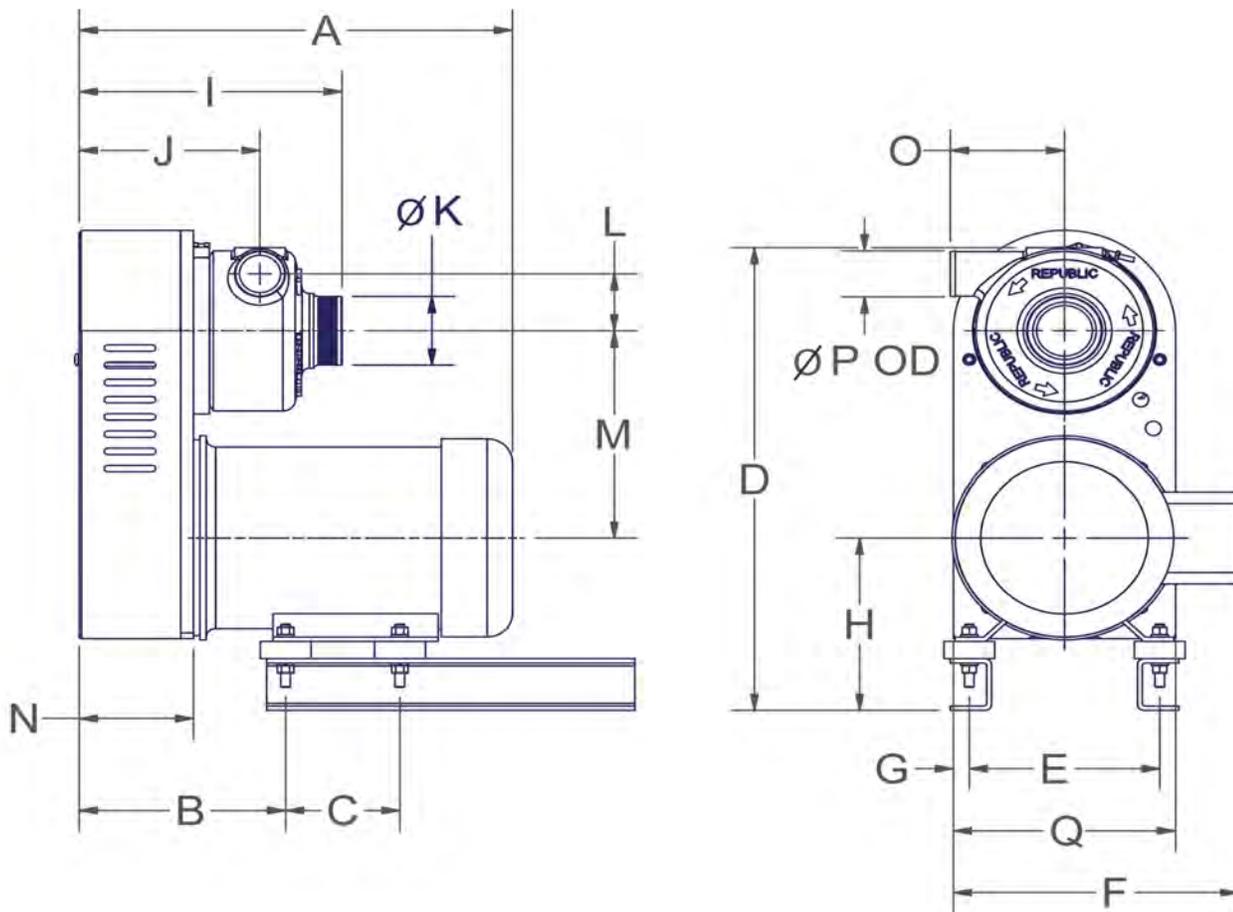
1. Have a qualified electrician configure the motor to your incoming voltage as noted in the Motor Wiring Section of the manual. Refer to the nameplate on the motor for the correct power supply requirements.
2. The blower should be located in a place where the drive belt and intake air filter can be easily serviced and maintained.
3. Avoid any type of liquid over-spray or continuous washdown of the blower. Shield the blower if needed. Flooding the blower can cause damage to the system.
4. Double check the pulley alignment and install the belt as shown in the Motor Pulley and Installation Belt diagrams. **Be sure to re-fasten the belt guard.**
5. Install the inlet air filter – improper filtration will void warranty. Install system piping and **check motor amperage draw.** High amperage draw may indicate too much flow. **Contact Republic Manufacturing or the local distributor with any questions.**
6. Ensure unit has unobstructive surrounding space of 3 feet (0.91 m) with 10 inches (254 mm) space in front of belt guard.

## Frequency of Inspection

<b>Filter</b>	Weekly
<b>Belt</b>	Monthly
<b>Grease motor (if applicable)</b>	Quarterly
<b>Keep blower free from contaminants</b>	Monthly

# Specifications and Dimensional Data

## RB500 Dimensions



HP	Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
3 (182T)	inch	17 1/16	8 1/8	4 1/2	20 1/8	7 1/2	11 1/4	5/8	7 1/2	10 3/8	7 1/8	3	2 1/2	9	1/2	4 1/2	2	8 3/4
	mm	433	206	114	511	190	286	16	190	264	181	76	64	229	13	114	51	222
5 (184T)	inch	17 1/16	8 1/8	5 1/2	20 1/8	7 1/2	11 1/4	5/8	7 1/2	10 3/8	7 1/8	3	2 1/2	9	1/2	4 1/2	2	8 3/4
	mm	433	206	140	511	190	286	16	190	264	181	76	64	229	13	114	51	222
7 1/2 (213T)	inch	20	9	5 1/2	20 7/8	8 1/2	12 7/8	1/8	8 1/4	10 3/8	7 1/8	3	2 1/2	9	1/2	4 1/2	2	8 3/4
	mm	508	229	140	530	216	316	3	210	264	181	76	64	229	13	114	51	222

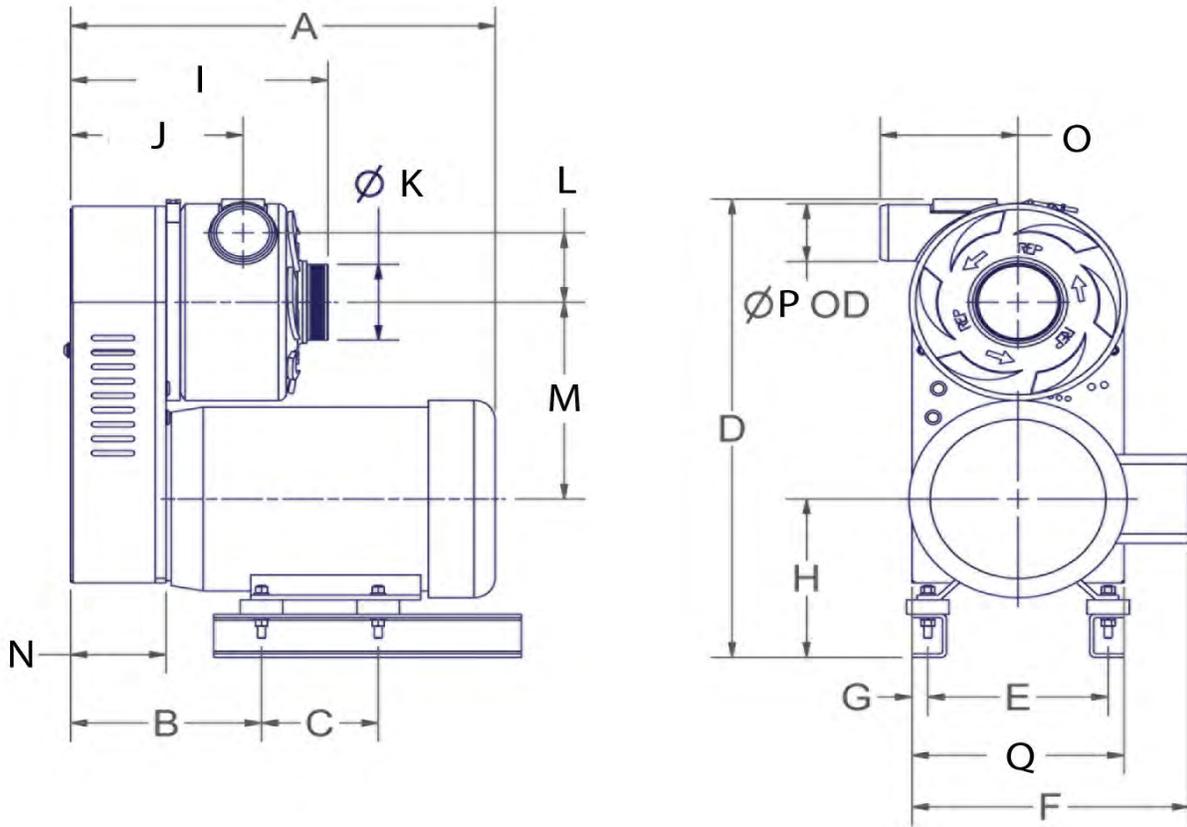
HP	Est. WGT. (lbs)	Est. WGT. (kg)
3 (182T)	120 lbs	54 kg
5 (184T)	131 lbs	59 kg
7 1/2 (213T)	180 lbs	81 kg

<b>Retro Kit Est. WGT. (lbs)</b>	50
<b>Retro Kit Est. WGT. (kg)</b>	22.6

Noise Control	With Enclosure	No Enclosure
With Silencer	69 dB	76 dB
No Silencer	75 dB	82 dB



## RB800 Dimensions



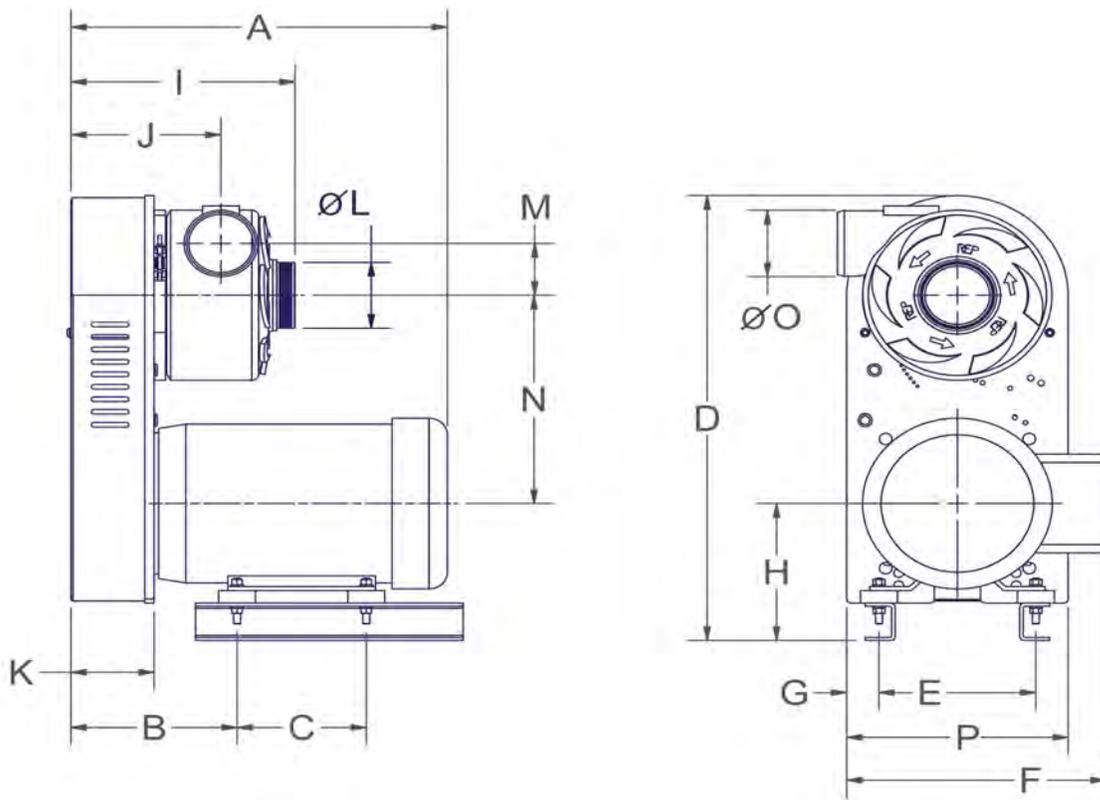
HP	Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
3 (182T)	inch	17 1/16	8 1/8	4 1/2	23 1/8	7 1/2	11 7/8	1 1/4	7 1/2	12 1/8	8 1/8	3.96	3 5/8	10 1/4	4 1/2	6 1/2	3	10
	mm	433	206	114	587	190	302	32	190	308	206	101	92	260	114	165	76	254
5 (184T)	inch	17 1/16	8 1/8	5 1/2	23 1/8	7 1/2	11 7/8	1 1/4	7 1/2	12 1/8	8 1/8	3.96	3 5/8	10 1/4	4 1/2	6 1/2	3	10
	mm	433	206	140	587	190	302	32	190	308	206	101	92	260	114	165	76	254
7 1/2 (213T)	inch	20	9	5 1/2	23 7/8	8 1/2	13 1/16	3/4	8 1/4	12 1/8	8 1/8	3.96	3 5/8	10 1/4	4 1/2	6 1/2	3	10
	mm	508	229	140	587	216	331	19	210	308	206	101	92	260	114	165	76	254
10 (215T)	inch	20 3/8	9	7	23 7/8	8 1/2	13 1/16	3/4	8 1/4	12 1/8	8 1/8	3.96	3 5/8	10 1/4	4 1/2	6 1/2	3	10
	mm	517	229	178	587	216	332	19	210	308	206	101	92	260	114	165	76	254

HP	Est. WGT. (lbs)	Est. WGT. (kg)
3 (182T)	138 lbs	62 kg
5 (184T)	149 lbs	67 kg
7 1/2 (213T)	198 lbs	89 kg
10 (215T)	226 lbs	102 kg

<b>Retro Kit Est. WGT. (lbs)</b>	68
<b>Retro Kit Est. WGT. (kg)</b>	30.8

Noise Control	With Enclosure	No Enclosure
With Silencer	74-78 dB	88-90 dB
No Silencer	80-82 dB	92-96 dB

## RB1200HC Dimensions



HP	Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
5 (184TC)	inch	17 1/16	8 1/8	5 1/2	26	7 5/8	12 7/8	2 1/4	7 1/2	12 1/8	8 1/8	4 1/2	3.96	3 1/8	12 1/2	4	12
	mm	433	206	140	660	194	327	57	190	308	206	114	101	79	317	102	305
7 1/2 (213TC)	inch	20	9	5 1/2	26 3/4	8 1/2	14 1/16	1 3/4	8 1/4	12 1/8	8 1/8	4 1/2	3.96	3 1/8	12 1/2	4	12
	mm	508	229	140	679	216	357	44	210	308	206	114	101	79	317	102	305
10 (215TC)	inch	20 3/8	9	7	26 3/4	8 1/2	14 1/16	1 3/4	8 1/4	12 1/8	8 1/8	4 1/2	3.96	3 1/8	12 1/2	4	12
	mm	518	229	178	679	216	357	44	210	308	206	114	101	79	317	102	305
15 (254TC)	inch	24 1/2	9 1/2	8 1/4	27 3/4	8 1/2	16 1/16	1	9 1/4	12 1/8	8 1/8	4 1/2	3.96	3 1/8	12 1/2	4	12
	mm	622	241	210	705	216	408	25	235	308	206	114	101	79	317	102	305
20 (256TC)	inch	24 7/16	9 1/2	10	27 3/4	10	16 1/16	1	9 1/4	12 1/8	8 1/8	4 1/2	3.96	3 1/8	12 1/2	4	12
	mm	621	241	254	705	254	408	25	235	308	206	114	101	79	317	102	305
25 (284TC)	inch	26 1/16	9 1/2	9 1/2	27	11	18 1/16	1/2	8 1/2	12 1/8	8 1/8	4 1/2	3.96	3 1/8	12 1/2	4	12
	mm	662	241	241	686	279	459	13	216	308	206	114	101	79	317	102	305

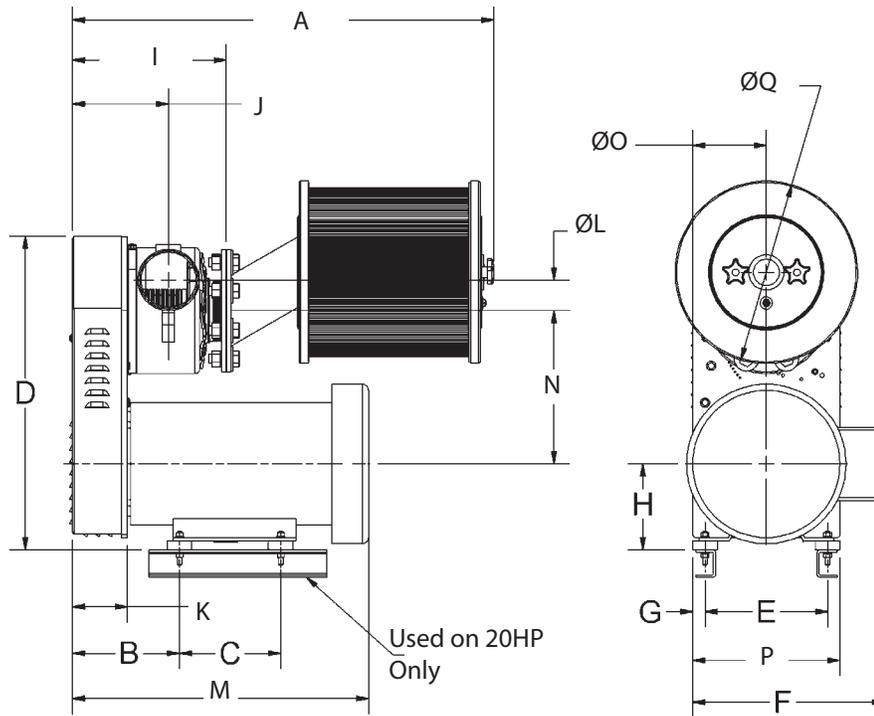
HP	Est. WGT. (lbs)	Est. WGT. (kg)
5 (184TC)	160 lbs	72 kg
7 1/2 (213TC)	209 lbs	94 kg
10 (215TC)	237 lbs	107 kg
15 (254TC)	364 lbs	165 kg
20 (256TC)	337 lbs	152 kg
25 (284TC)	462 lbs	209 kg

<b>Retro Kit Est. WGT. (lbs)</b>	79
<b>Retro Kit Est. WGT. (kg)</b>	35.8

Noise Control	With Enclosure	No Enclosure
With Silencer	74-78 dB	88-90 dB
No Silencer	80-82 dB	92-96 dB



## RB2000 Dimensions

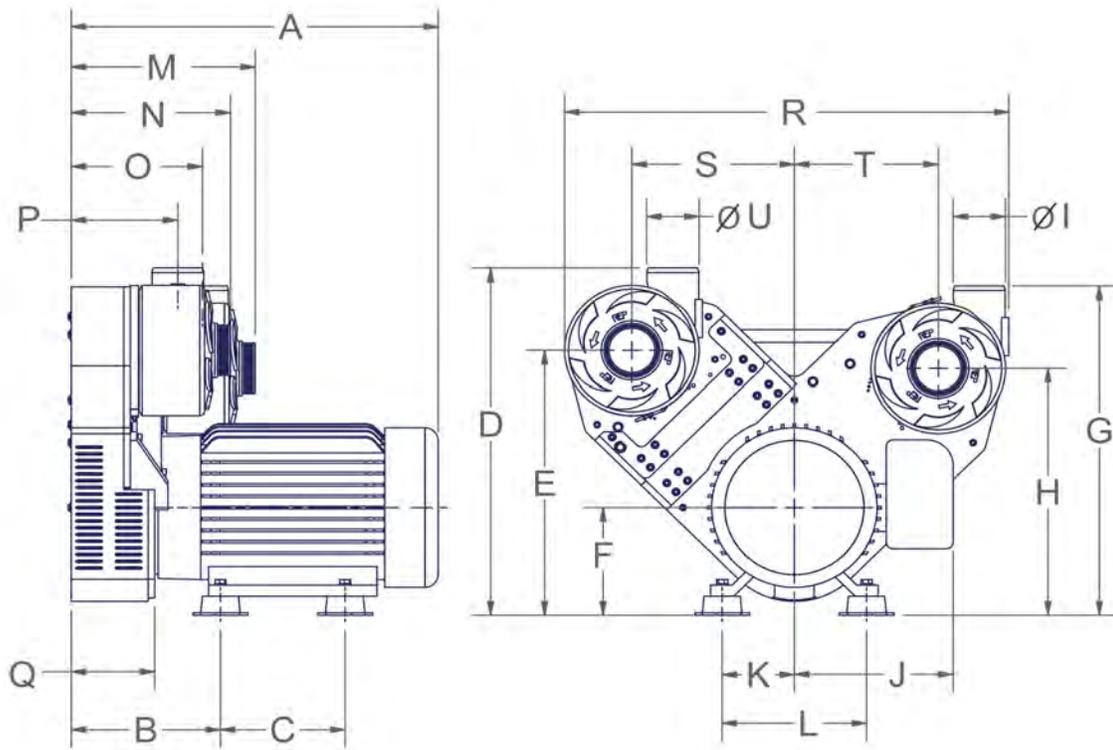


HP	Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
20 (256TC)	inch	34 3/8	9 1/2	10	27 13/16	10	16 1/32	1	9 1/4	12 1/2	7 13/16	4 1/2	2 1/2	24 13/32	12 1/2	6	12	14 7/8
	mm	340	241	254	706	254	407	25	235	316	198	114	64	620	316	152	305	378
25 (284TSC)	inch	34 3/8	9 1/2	9 1/2	27 1/16	11	18 3/32	1/2	8 1/2	12 1/2	7 13/16	4 1/2	2 1/2	26 1/16	12 1/2	6	12	14 7/8
	mm	340	241	241	687	279	460	13	216	316	198	114	64	662	316	152	305	378
30 (286TSC)	inch	34 3/8	9 1/2	9 1/2	28 1/6	11	19 1/8	1/2	8 1/2	12 1/2	7 13/16	4 1/2	2 1/2	26 3/16	12 1/2	6	12	14 7/8
	mm	340	241	241	713	279	486	13	216	316	198	114	64	665	316	152	305	378
40 (324TSC)	inch	34 3/8	10	10 1/2	29 1/2	12 1/2	20 5/8	1/4	9 1/2	12 1/2	7 13/16	4 1/2	2 1/2	29 25/32	12 1/2	6	12	14 7/8
	mm	340	254	267	749	318	524	6	241	316	198	114	64	756	316	152	305	378

HP	Est. WGT. (lbs)	Est. WGT. (kg)
20 (256TC)	337 lbs	152 kg
25 (284TSC)	362 lbs	164 kg
30 (286TSC)	474 lbs	215 kg
40 (324TSC)	528 lbs	239 kg

<b>Retro Kit Est. WGT. (lbs)</b>	79
<b>Retro Kit Est. WGT. (kg)</b>	35.8

## RB2400 Dimensions



HP	Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
20 (256TC)	inch	26 5/16	11 3/8	10	27 3/8	20 7/8	8 1/2	26	19 1/2	4	13 1/8	5 1/2	11	14	12 1/8	10	8 1/8	6 3/8	33 7/8	12 3/8	11	4
	mm	668	289	254	695	530	216	660	495	102	333	140	279	356	308	254	206	162	860	314	279	102
25 (284TSC)	inch	27 15/16	11 3/8	9 1/2	27 3/8	20 7/8	8 1/2	26	19 1/2	4	12 1/16	5 1/2	11	14	12 1/8	10	8 1/8	6 3/8	33 7/8	12 3/8	11	4
	mm	710	289	241	695	530	216	660	495	102	306	140	279	356	308	254	206	162	860	314	279	102
30 (286TSC)	inch	28 1/16	11 3/8	9 1/2	27 3/8	20 7/8	8 1/2	26	19 1/2	4	13 1/8	5 1/2	11	14	12 1/8	10	8 1/8	6 3/8	33 7/8	12 3/8	11	4
	mm	713	289	241	695	530	216	660	495	102	333	140	279	356	308	254	206	162	860	314	279	102
40 (324TSC)	inch	31 5/8	11 7/8	10 1/2	28 3/8	21 7/8	9 1/2	27	20 1/2	4	14 5/8	6 1/4	12 1/2	14	12 1/8	10	8 1/8	6 3/8	33 7/8	12 3/8	11	4
	mm	803	302	267	721	556	241	686	521	102	371	159	317	356	308	254	206	162	860	314	279	102
50 (326TSC)	inch	31 3/4	11 7/8	12	28 3/8	21 7/8	9 1/2	27	20 1/2	4	14 5/8	6 1/4	12 1/2	14	12 1/8	10	8 1/8	6 3/8	33 7/8	12 3/8	11	4
	mm	806	302	305	721	556	241	686	521	102	371	159	317	356	308	254	206	162	860	314	279	102

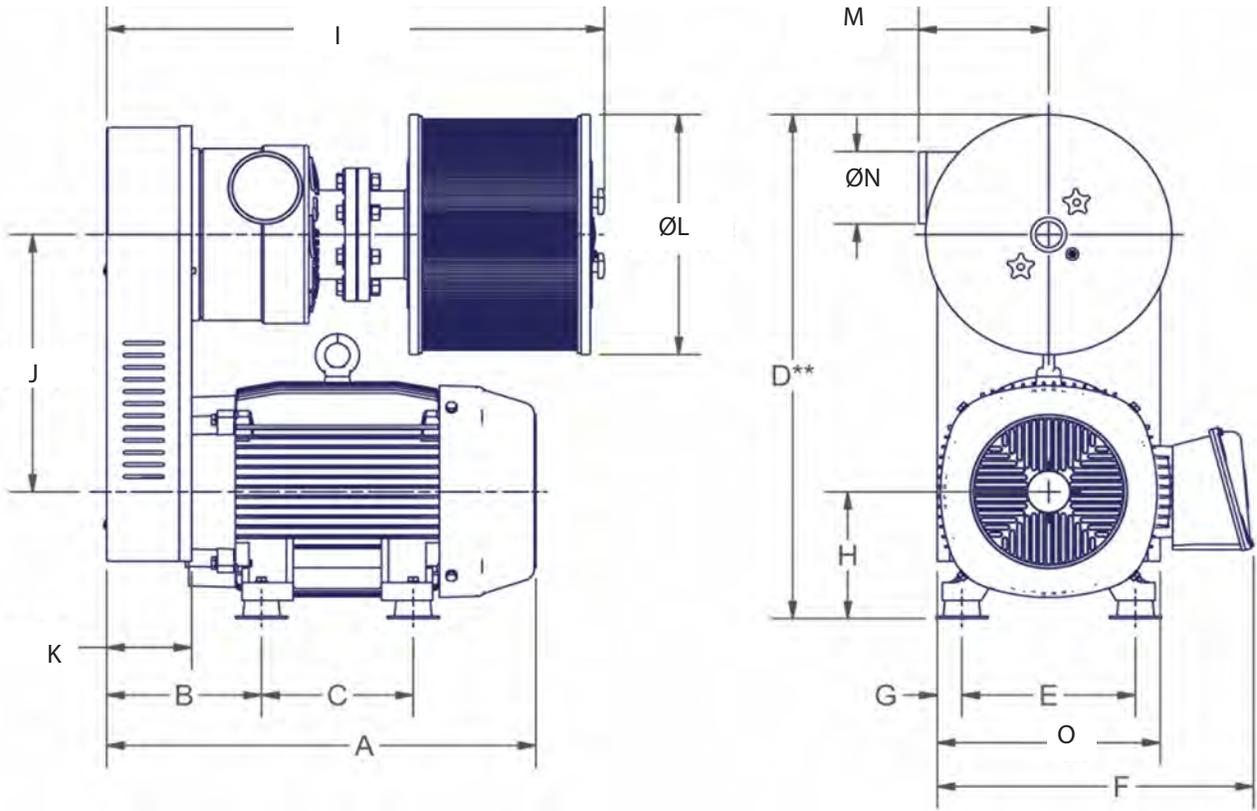
HP	Est. WGT. (lbs)	Est. WGT. (kg)
20 (256TC)	366 lbs	166 kg
25 (284TSC)	491 lbs	222 kg
30 (286TSC)	503 lbs	228 kg
40 (324TSC)	636 lbs	288 kg
50 (326TSC)	695 lbs	315 kg

<b>Retro Kit Est. WGT. (lbs)</b>	108
<b>Retro Kit Est. WGT. (kg)</b>	49

Noise Control	With Enclosure	No Enclosure
<b>With Silencer</b>	74-78 dB	88-90 dB
<b>No Silencer</b>	80-82 dB	92-96 dB



## RB4000 Dimensions



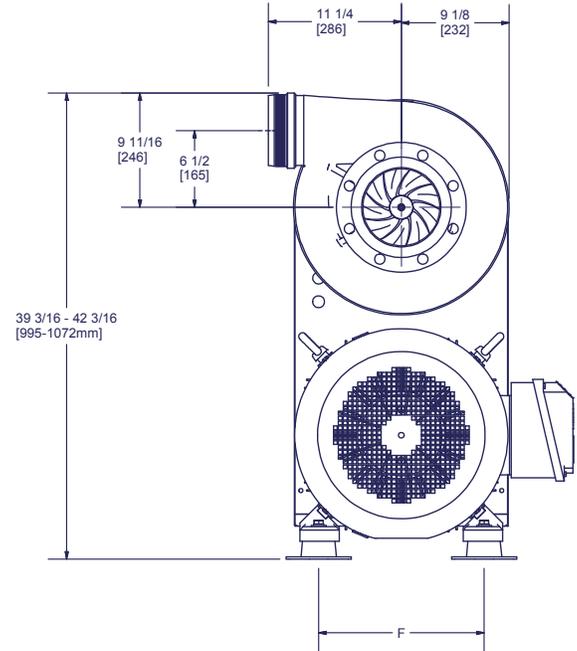
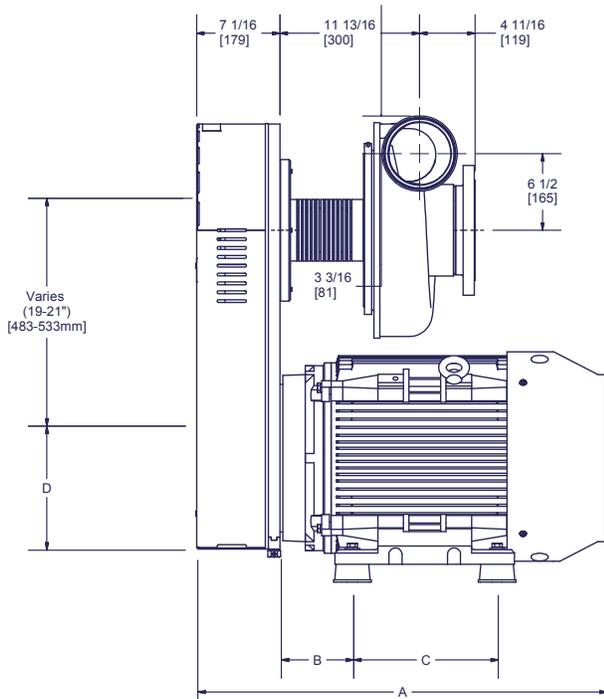
HP	Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
40 (324TSC)	inch	30 15/16	9 7/8	16	40 3/16	14 5/8	20 11/16	1 11/16	10 1/2	40 3/16	21 1/4	6 7/8	19 7/8	10 1/2	6	18
	mm	786	251	406	1021	371	525	43	267	1021	540	175	505	267	152	457
50 (326TSC)	inch	32 7/16	9 7/8	16	40 3/16	14 5/8	20 11/16	1 11/16	10 1/2	40 3/16	21 1/4	6 7/8	19 7/8	10 1/2	6	18
	mm	824	251	406	1021	371	525	43	267	1021	540	175	505	267	152	457
60 (364TSC)	inch	34 5/8	12 1/2	11 1/4	40 3/16	14	25 5/16	2	10 1/2	40 3/16	21 1/4	6 7/8	19 7/8	10 1/2	6	18
	mm	879	318	286	1021	356	643	51	267	1021	540	175	505	267	152	457
75 (365TSC)	inch	34 5/8	12 1/2	12 1/4	40 3/16	14	25 5/16	2	10 1/2	40 3/16	21 1/4	6 7/8	19 7/8	10 1/2	6	18
	mm	879	318	311	1021	356	643	51	267	1021	540	175	505	267	152	457

HP	Est. WGT. (lbs)	Est. WGT. (kg)
40 (324 TSC)	517 lbs	234 kg
50 (326TSC)	575 lbs	261 kg
60 (364 TSC)	877 lbs	398 kg
75 (365TSC)	934 lbs	424 kg

<b>Retro Kit Est. WGT. (lbs)</b>	280
<b>Retro Kit Est. WGT. (kg)</b>	127

\*\*Depending upon blower pulley size. Maximum dimension shown. (Minimum is 1-1/2 inch less.)

# RB4002 Dimensions



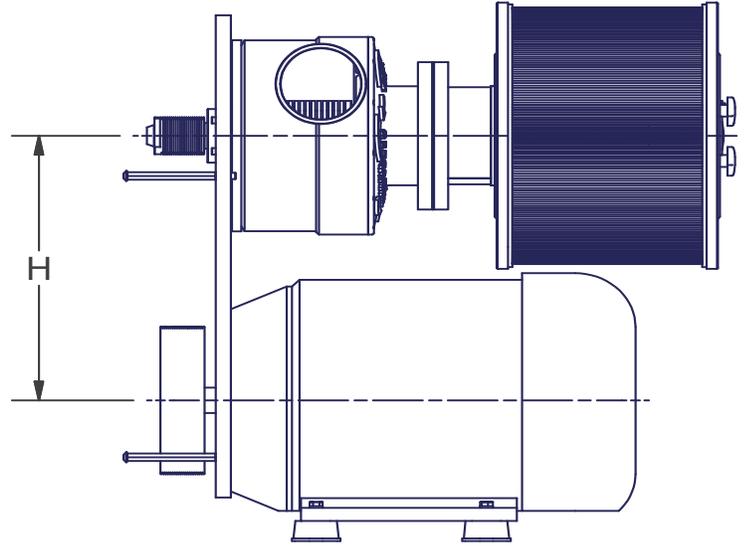
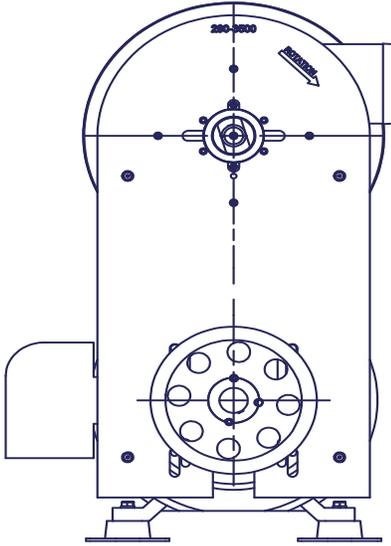
HP	Unit	A	B	C	D	F
40 (324TSC)	inch	33 19/50	5 1/4	10 1/2	9 1/2	12 1/2
	mm	848	133	267	241	318
50 (326TSC)	inch	33 19/50	5 1/4	12	9 1/2	12 1/2
	mm	848	133	305	241	318
60 (364TSC)	inch	35	5 22/25	11 1/4	10 1/2	14
	mm	889	149	286	241	356
75 (365TSC)	inch	35	5 22/25	12 1/4	10 1/2	14
	mm	889	149	311	241	356

HP	Est. WGT. (lbs)	Est. WGT. (kg)
40 (324 TSC)	517 lbs	234 kg
50 (326TSC)	575 lbs	261 kg
60 (364 TSC)	877 lbs	398 kg
75 (365TSC)	934 lbs	424 kg

<b>Retro Kit Est. WGT. (lbs)</b>	280
<b>Retro Kit Est. WGT. (kg)</b>	127

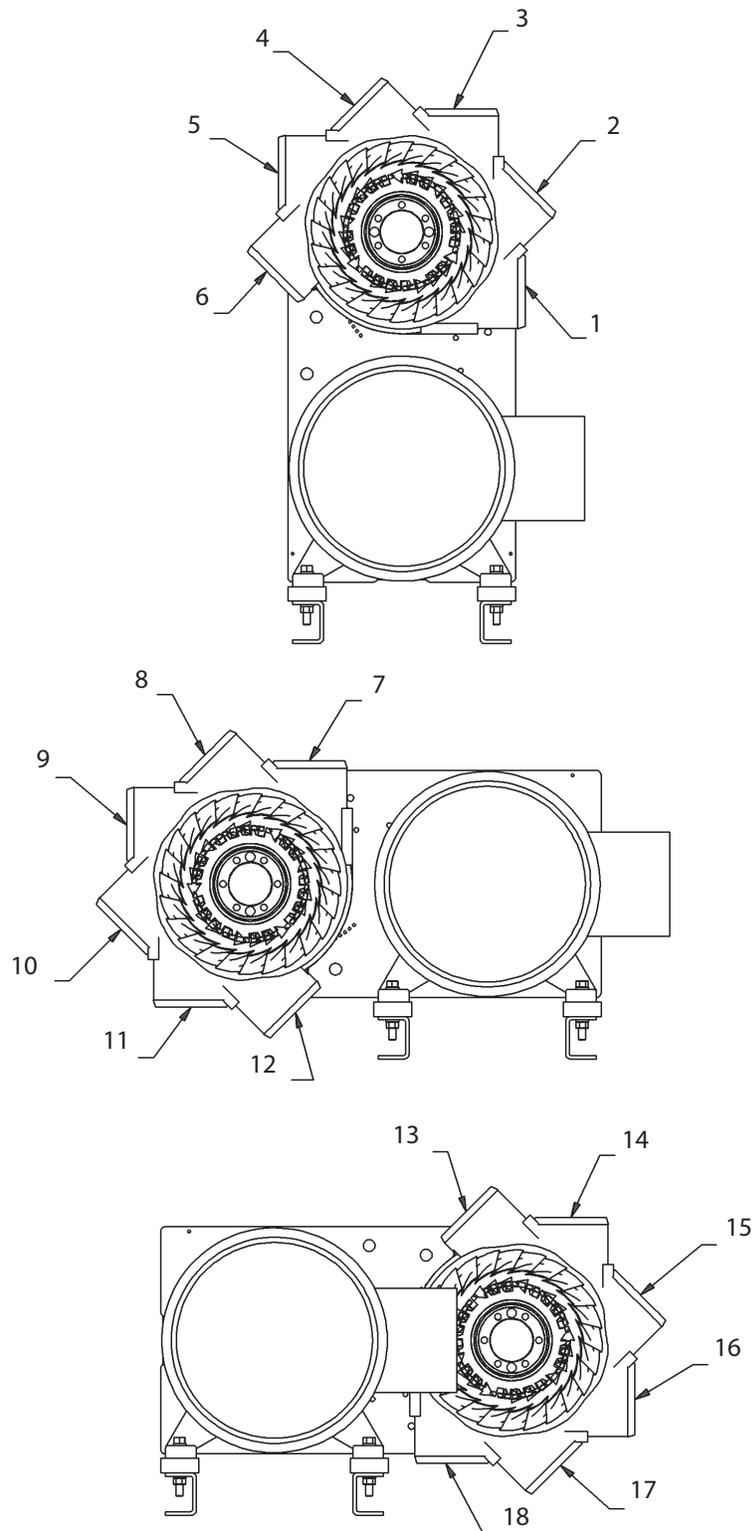


## RB4000 Pulley Center Distances



Blower Pulley Diameter		H	
inch	mm	inch	mm
2.75	69.85	20.01	508.25
2.95	74.93	19.89	505.25
3.15	80.00	19.76	501.90
3.35	85.09	19.64	498.85
3.55	90.16	19.51	495.55
3.75	95.25	19.39	492.50
3.95	100.33	19.39	492.50

## Blower Positions



Position No. 5 is standard unless otherwise specified by customer. If at all possible, try to avoid Position No. 13-18 on 20HP blowers because of air filter and motor electric box interference.



# Motor Selection Guidelines

## Structural Specifications

Motor Frame	Type	Blower	Size
NEMA Frame	C-Face	All Models	All
IEC Frame	132S & Below	RB500	B14 (C-Face)
		RB800 & RB1200HC	B5 (D-Flange)
	132S-160L	All Models	B14 (C-Face)
	160L -180M	RB500	B14 (C-Face)
		RB800 & RB1200HC	B5 (D-Flange)
180M & Above	RB800, RB1200HC, RB2000, RB2400, RB4000, RB4002	B5 (D-Flange)	

## Mechanical & Electrical Specifications

Frequency	Voltage	RPM	Phase
50 Hz	208-396V	2750-2900 RPM	3
60 Hz	208/230-495V	3450-3600 RPM	3

## Motor Sizing

Blower	Power Range	Acceptable Frame Sizes	
		NEMA	IEC
RB500	3-7.5 HP	182TC, 184TC, 213TC	90L, 112M, 132S
RB800	3-15 HP	182TC, 184TC, 213TC, 215TC	90L, 112M, 132S
RB1200HC	5-25 HP	182TC, 213TC, 215TC, 254TC 256TC, 284TSC	112M, 132S, 160M, 160L
RB2000	20-30 HP	256TC, 284TSC, 286TSC	160M, 160L, 180M
RB2400	20-50 HP	256TC, 284TSC, 286TSC, 324TSC, 326TSC	160M, 160L, 180M, 200L
RB4000/RB4002	40-75 HP	324TSC, 326TSC, 364TSC, 365TSC	200L, 225M, 250M

## Blower Maximum Rotational Speed

Blower	Maximum Rotational Speed
RB500	25.8k RPM
RB800	18.7k RPM
RB1200HC	19.7k RPM
RB2000	23.2k RPM
RB2400	19.7k RPM
RB4000/RB4002	16.4k RPM

## Torque for Fastening Screws

Location	Blower	Torque (ft-lbs)
Back Plate to Motor	RB800-RB2400	60
	RB4000-RB4002	140
Back Plate to Bearing Housing	RB800-RB4002	24
Tension Pulley	RB800-RB2400	45
Motor Pulley Set Screws	RB500-RB4002	36

## Mounting Bolt Length\*\*

Frame Size	Thread Specification	Bolt Length
182TC/184TC	1/2-13 UNC	1-1/4"
213TC/215TC		
254TC/256TC		
284TSC/286TSC		1-1/4" (RB500-RB2000) 2" (RB2400-RB4000)
324TSC/326TSC		1-1/4" (RB500-RB2400) 2" (RB4000)
364TSC/365TSC		2"
90L	M8	20mm
112M		
132S		30mm
160M	M12	45mm
160L		
180M	5/8-11 UNC (Thru)	2-1/2"
200L		
225M		
250M		



Hardware is provided with each retro kit. User is responsible for making sure the length of the screws is appropriate for the motor being attached. Screws that are too long may contact the motor windings and cause damage.

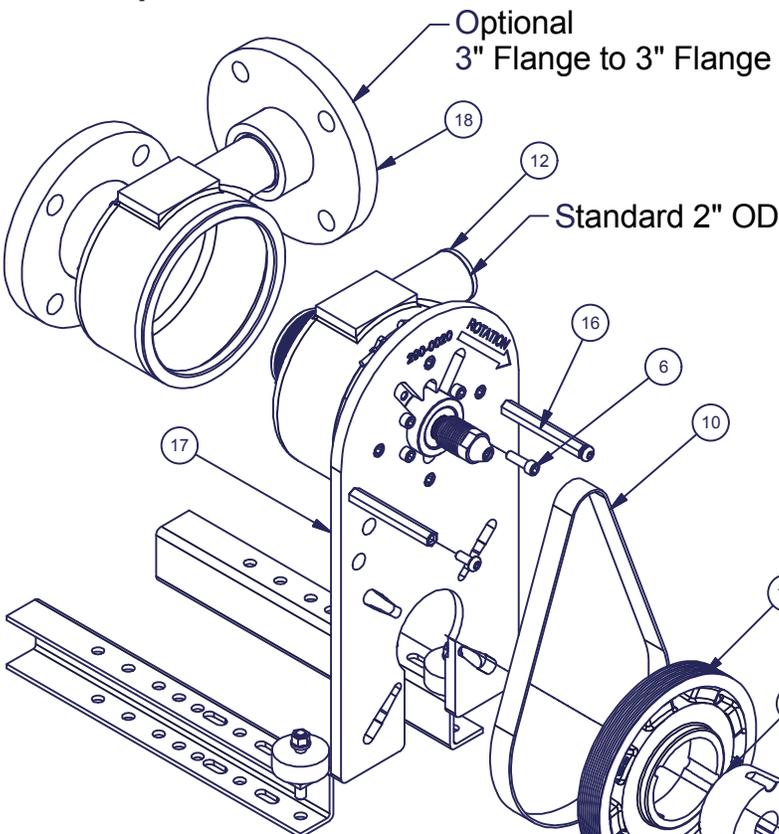


## Motor Wiring and Start-Up

- ▲ **Only qualified mechanical or electrical personnel** should perform wiring or maintenance on the blower assembly.
- ▲ Never run a centrifugal blower to atmosphere, as this can cause overloading and damage the motor. Always check your installation to make sure the motor is running within the motor manufacturers specific amp ranges.
- ▲ Republic blowers are shipped with the belts removed. **Motor rotation must be checked prior to installing the belt!** Running the blower/motor assembly backwards will cause improper performance and damage the blower.
- ▲ With the belt removed, “bump” the power to determine rotation of motor.
- ▲ The blower should be rotating clockwise (CW) from the belt side of the blower, counter-clockwise (CCW) if you are on the motor side or impeller side of the blower. Rotation arrows on the blower cast housing (Motor Side) show correct rotation of impeller rotation. If the motor is going the wrong direction, then have your qualified electrician change the direction of rotation.
- ▲ If the blower is allowed to run in the wrong direction, you could cause damage to the idler pulley assembly spring or belt. Even in reverse, a centrifugal blower will still provide a substantial amount of airflow and pressure, but it will not perform to your satisfaction.

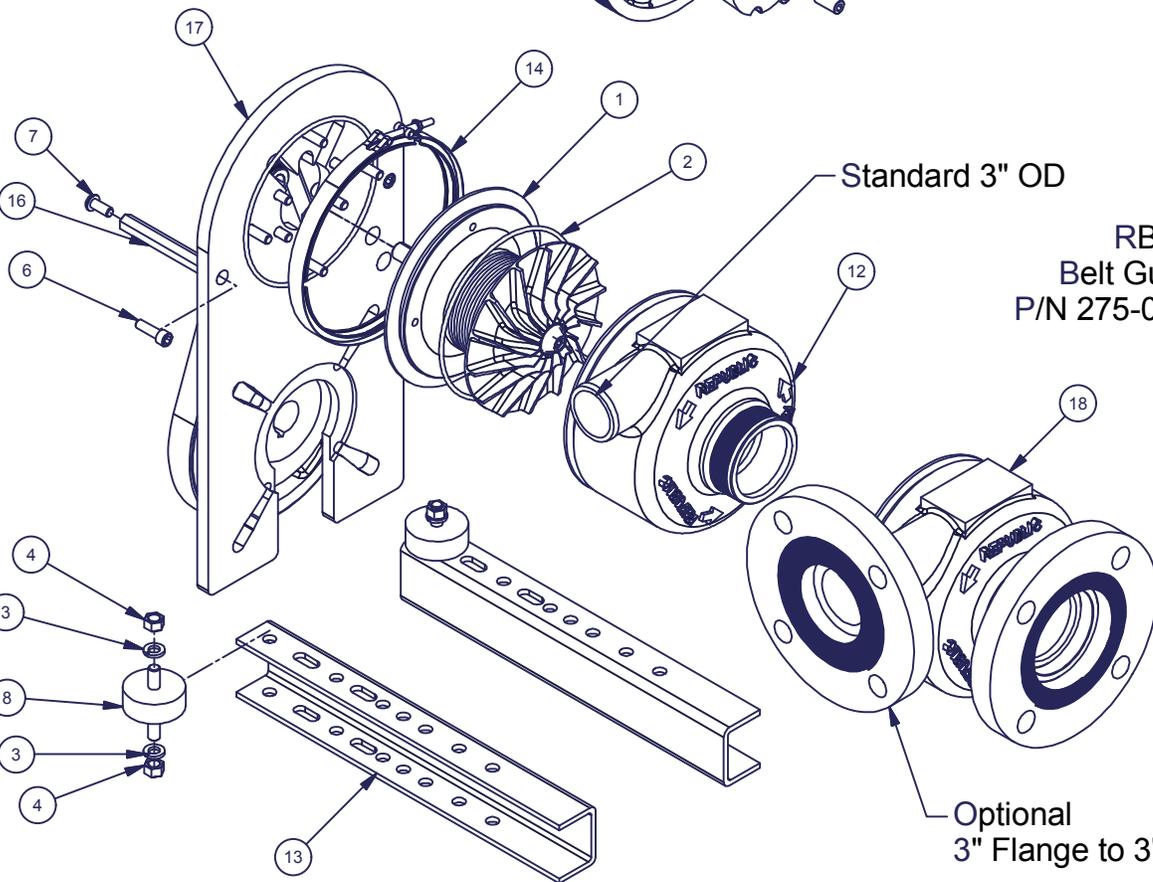
# Exploded Parts Drawings

## RB500 Exploded View



18	250-0310FL	1	RB500 Blower Hsg Flanged
17	290-0020	1	RB500 Back Plate
16	275-0100	2	Stand-Off
15	275-0020	1	RB500 Belt Guard
14	250-0910	1	7" Band Clamp RB500
13	250-0650	2	Mount Motor
12	250-0310	1	RB500 2" Port CAST Housing
11	232-1026	1	RB500 CAST Motor Pulley
10	230-5850	1	Belt 850 PJ for RB500
9	230-4001	1	1-1/8" Bore Taper Lock Bushing
8	210-2200	2	Isolator Mount
7	210-1607	2	Screw, SS 5/16-18 x 3/4 Button Hd
6	210-1602	10	Screw, 5/16-18 x 1 SS SHC
5	210-1005	2	Set Screw 1/2-13 x 1" Soc Cup Pt
4	210-0902	4	3/8-16 SS Hex Nut
3	210-0307	4	3/8 SS Split Lock Washer
2	210-0208	1	O-Ring 256 Viton
1	200-8xxx	1	Brg Hsg Assy w/o pulley RB500
ITEM	PART NUMBER	QTY	DESCRIPTION

Bill of Materials

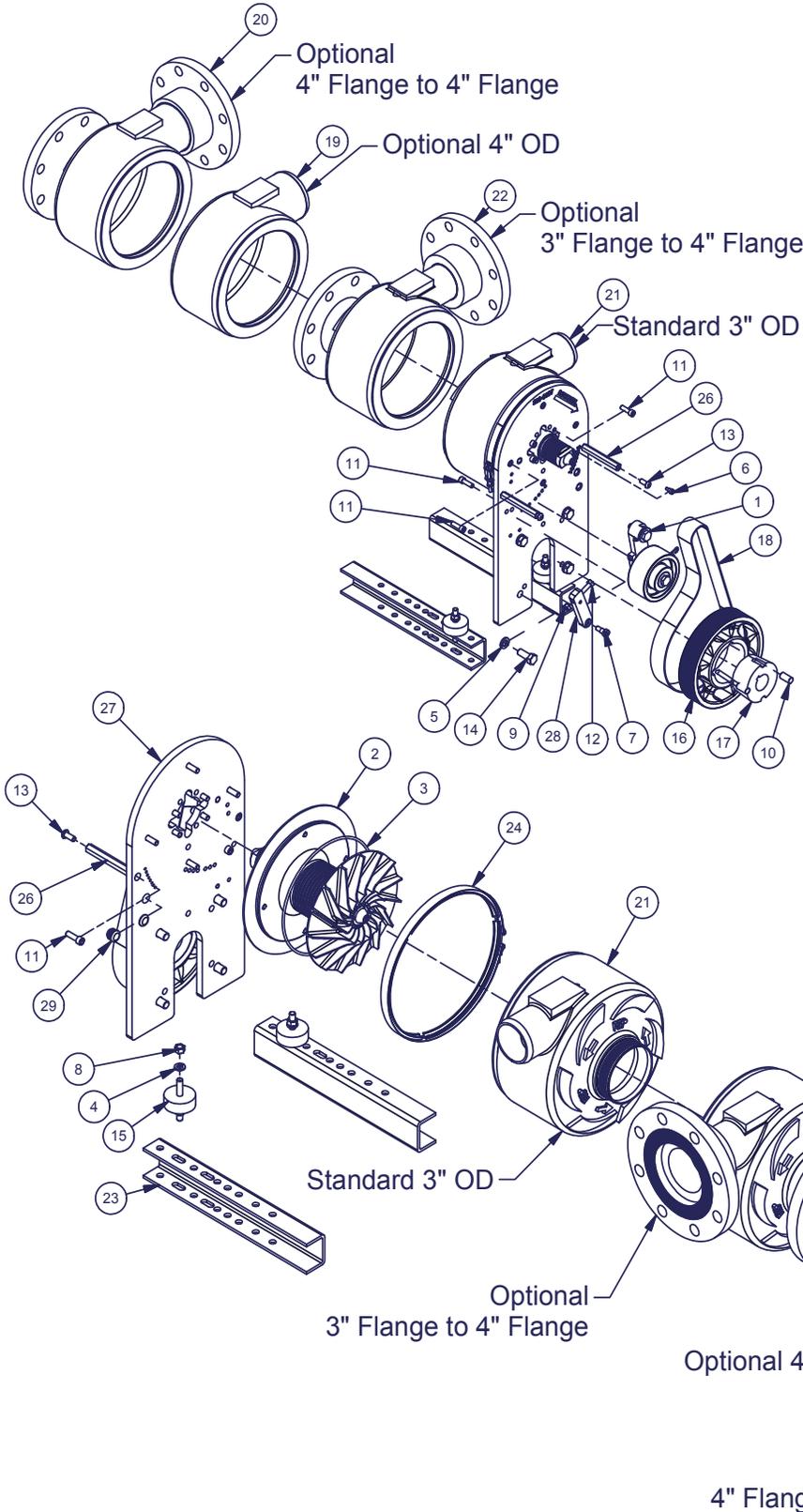


RB500  
Belt Guard  
P/N 275-0020

Optional  
3" Flange to 3" Flange



# RB800 Exploded View

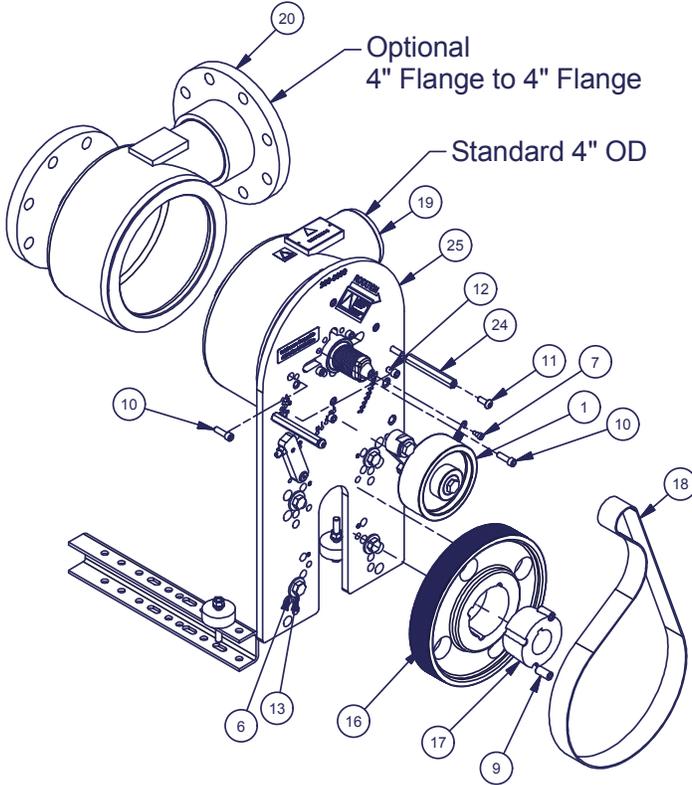


Bill of Materials			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	200-0214	1	4" Steel Dbl Brg. T. P. Assembly
2	200-9xxx	1	Bearing Housing Assembly
3	210-0200	1	O-Ring 265 Viton (Housing)
4	210-0307	4	3/8 SS Split Lock Washer
5	210-0308	4	1/2 SS Split Lock Washer
6	210-0601	1	Bolt Shoulder 1/4x1/4 SS SH w/Nylok Patch
7	210-0602	1	Bolt Shoulder 3/8x3/8 SS SH w/Long Lok
8	210-0902	4	3/8-16 SS Hex Nut
9	210-0903	1	5/16-18 SS Hex Nut
10	210-1005	2	Set Screw 1/2-13 x 1" Soc Cup Pt
11	210-1602	11	Screw, 5/16-18 x 1 SS SHC
12	210-1606	1	Screw 5/16-18x2 SS HH Tap Bolt
13	210-1607	2	Screw, SS 5/16-18 x 3/4 Button Hd
14	210-1801	4	Screw, 1/2-13 x 1.25 SS Hex Hd
15	210-2200	2	Isolator Mount
16	230-1026	1	RB800 Cast Motor Pulley
17	230-400x	1	Taper Lock Bushing (Dependent on Pulley)
18	230-4xxxK	1	Belt Kit with Spring (Dependent on Motor)
19	250-0300	1	4" Port CAST Blower Housing
20	250-0300FL	1	RB1200 Blower Flange Hsg
21	250-0301	1	3" Port CAST Blower Housing
22	250-0301FL	1	RB800 Blower Flanged Hsg
23	250-0650	2	Mount Motor
24	250-0900	1	Band Clamp
25	275-0001	1	RB800 Belt Guard
26	275-0100	2	Stand-Off
27	290-0007	1	RB800 Std. Back Plate with Helicoil
28	290-0200P	1	Tension Block
29	310-9032	2	Plastic Plug, 3/4 x 14-20

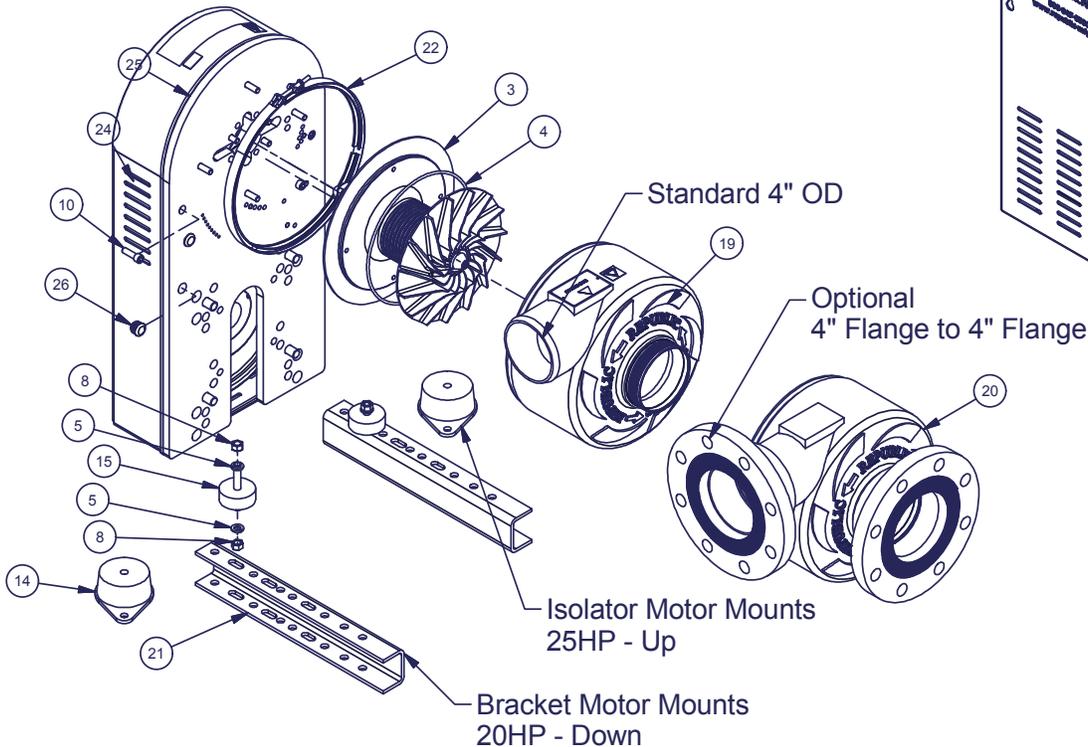


# RB1200HC Exploded View

Refer to Tension Spring Bolt Position Chart: 100-00001

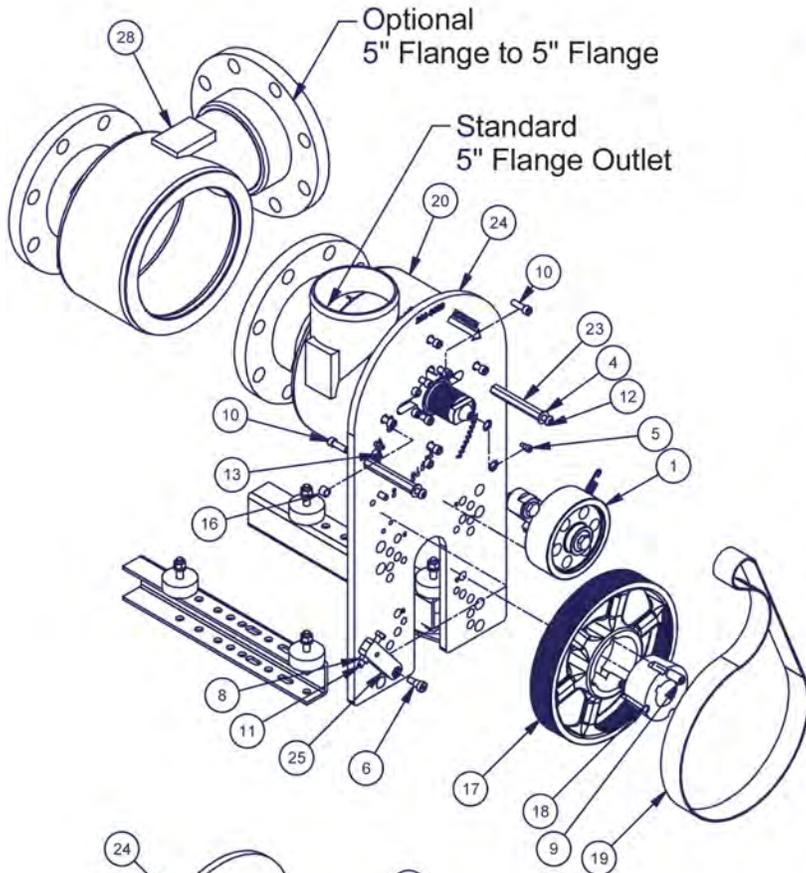


Bill of Materials			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	200-0206	1	5" Steel Dbl Brg. T. P. Assy.
2	200-0224	1	Assy, Tension Pulley Adjust Block
3	200-9XXX	1	Bearing Housing Assembly
4	210-0200	1	O-Ring 265 Viton (Housing)
5	210-0307	8	Washer, 3/8 SS Split Lock
6	210-0326	4	Washer, 1/2-13 Flat SS
7	210-0601	1	Bolt Shoulder 1/4x1/4 SS SH w/Nylok Patch
8	210-0902	8	3/8-16 SS Hex Nut
9	210-1005	2	Set Screw 1/2-13 x 1" Soc Cup Pt
10	210-1602	10	Screw, 5/16-18 x 1 SS SHC Nylok
11	210-1607	2	Screw, SS 5/16-18 x 3/4 Button Hd
12	210-1608	2	5/16-18 x 1/2 SS SHC Screw
13	210-1801	4	Screw, 1/2-13 x 1.25 SS Hex Hd
14	210-2201	4	Isolator Mount, 661-30
15	210-2220	4	Isolator Mount
16	230-1025	1	RB1200 J-Section Pulley
17	230-400x	1	Taper Lock Bushing (Varies with Motor)
18	230-4xxxK	1	Belt Kit with Spring (Varies with Pulley)
19	250-0300	1	4" Port CAST Blower Housing
20	250-0300FL	1	RB1200 Blower Flange Hsg
21	250-0650	2	Mount Motor
22	250-0900	1	Band Clamp
23	275-0000	1	Beltguard, RB1200 / RB2000
24	275-0100	2	Stand-Off
25	290-0000	1	RB1200 Backplate with Helicoil
26	310-9032	2	Plastic Plug, 3/4 x 14-20

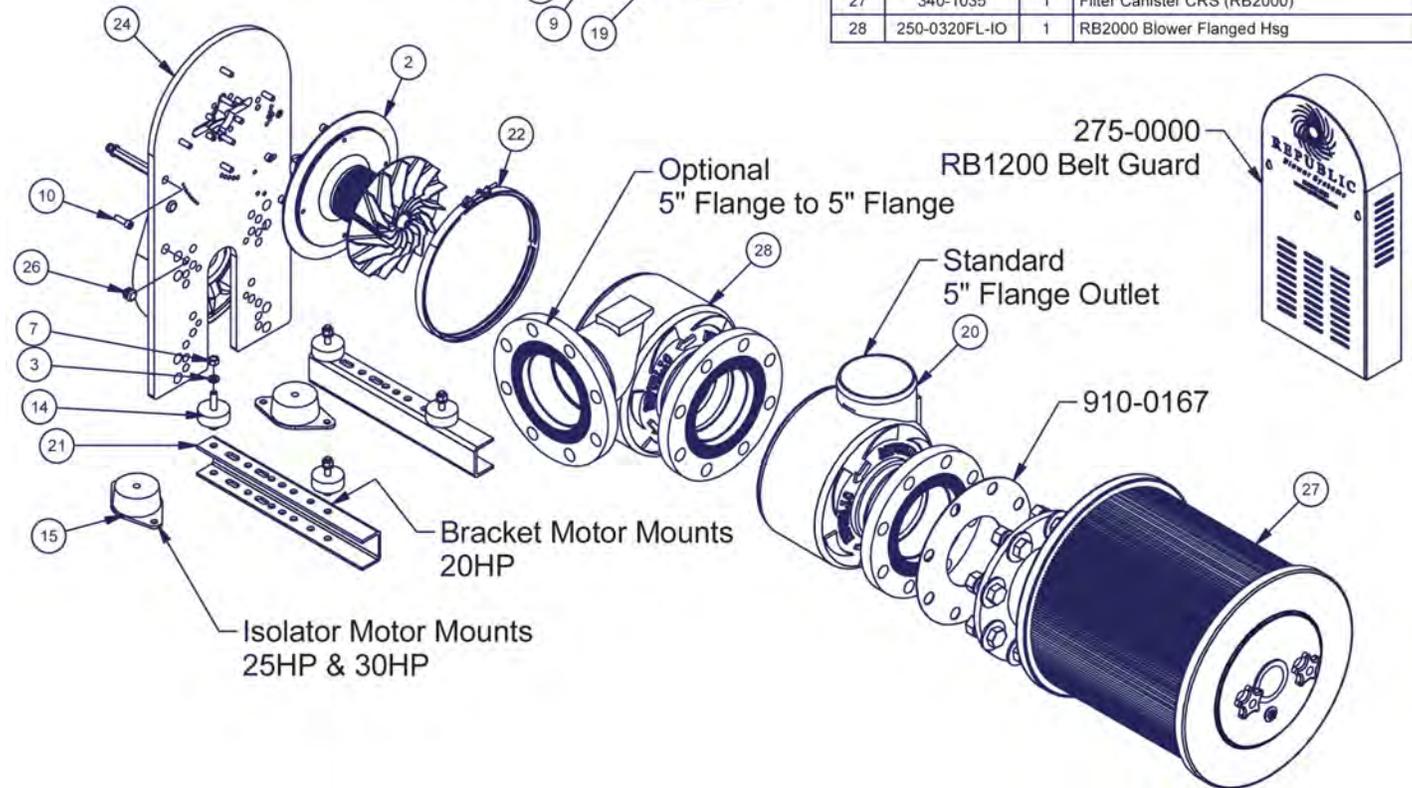




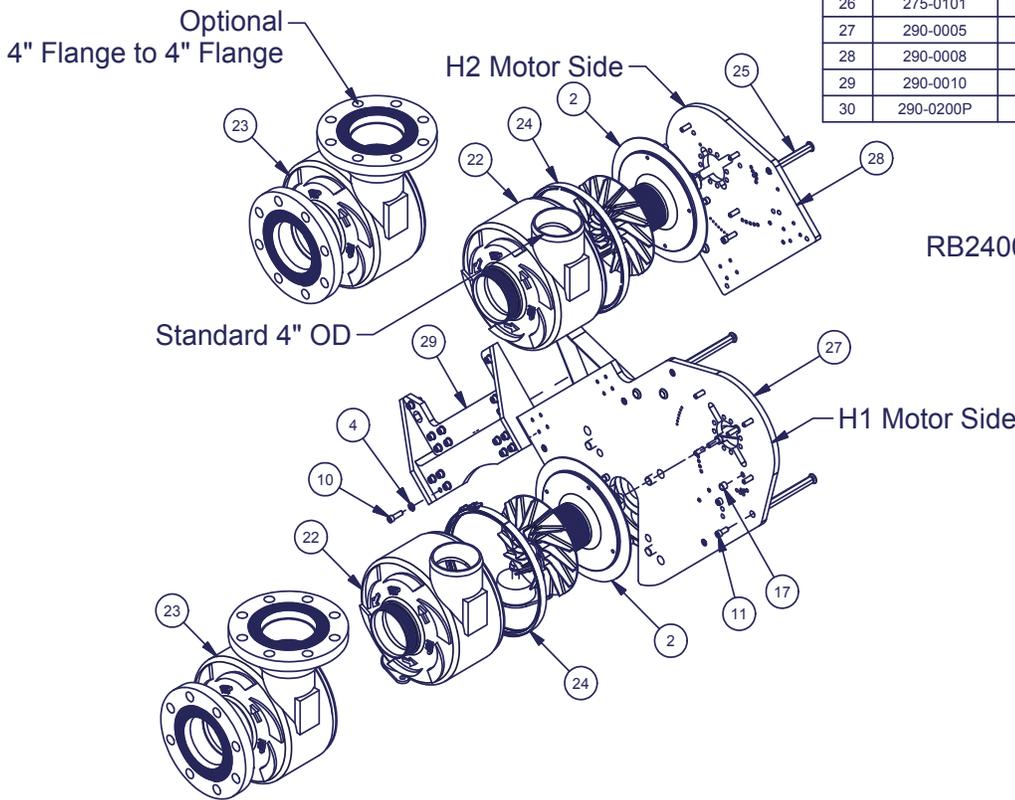
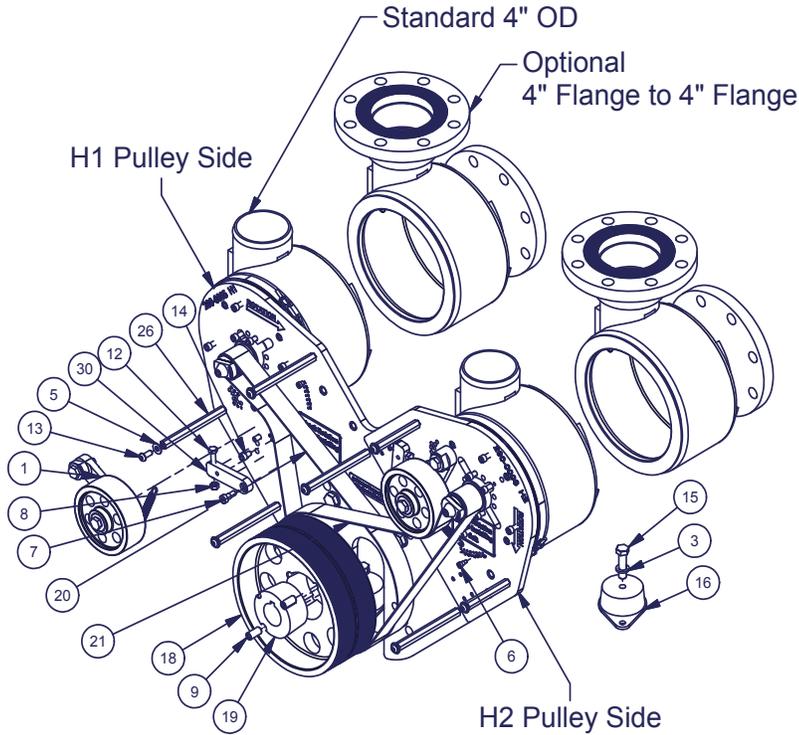
# RB2000 Exploded View



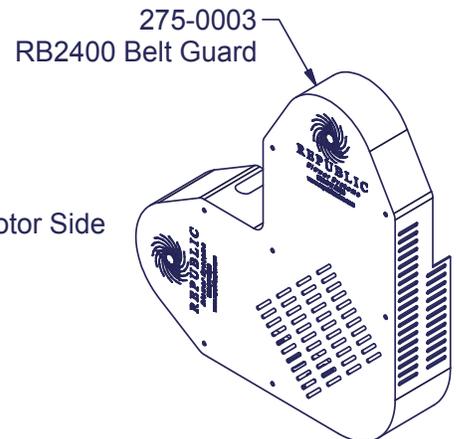
Bill of Materials			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	200-0206	1	5" Steel Dbl Brg. T. P. Assembly
2	200-2xxx	1	RB2000 Balanced H/C Bearing Housing Assy
3	210-0307	4	3/8 SS Split Lock Washer
4	210-0322	2	Washer, 5/16-18 SS Flat
5	210-0601	1	Shoulder Bolt (Ext. Spring)
6	210-0602	1	Shoulder bolt SS 3/8 X 3/8
7	210-0902	4	3/8-16 SS Hex Nut
8	210-0903	1	5/16-18 SS Hex Nut
9	210-1005	2	Set Screw 1/2-13 x 1" Soc Cup Pt
10	210-1602	13	Screw, 5/16-18 x 1 SS SHC
11	210-1606	1	Screw 5/16-18x2 SS HH Tap Bolt
12	210-1607	2	Screw, SS 5/16-18 x 3/4 Button Hd
13	210-1608	2	5/16-18 x 1/2 SS SHC Screw
14	210-2200	2	Isolator Mount
15	210-2201	2	Isolator Mount. 661-30
16	210-2301	1	Helicoil 3/8-16, 11856CN375
17	230-1025	1	RB1200 Cast Motor Pulley
18	230-4003	1	1-5/8" Bore Taper Lock Bushing
19	230-4700K	1	Kit (Belt with Spring)
20	250-0320FL	1	RB2000 Blower Flanged Hsg (Inlet Only)
21	250-0650	2	Mount Motor
22	250-0900	1	Band Clamp
23	275-0100	2	Stand-Off
24	290-0000	1	RB1200 Back Plate
25	290-0200P	1	Tension Block
26	310-9032	2	Plastic Plug, 3/4 x 14-20
27	340-1035	1	Filter Canister CRS (RB2000)
28	250-0320FL-IO	1	RB2000 Blower Flanged Hsg



# RB2400 Exploded View



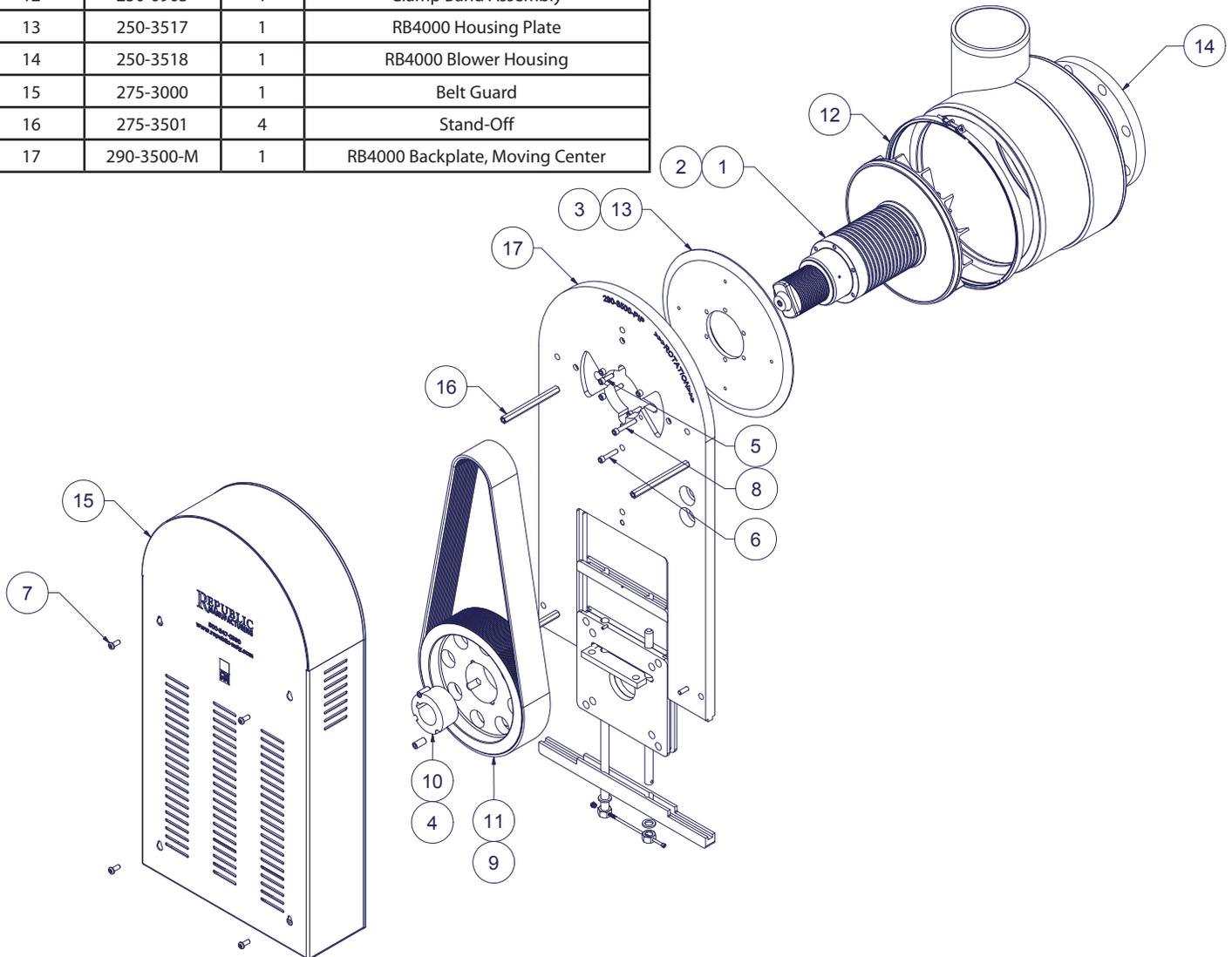
Bill of Materials			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	200-0206	2	5" Steel Dbl Brg. T. P. Assembly
2	200-9xxx	2	RB1200 Balanced H/C Bearing Housing Assy
3	210-0308	4	1/2 SS Split Lock Washer
4	210-0318	18	5/16 SS Split Lock Washer
5	210-0322	7	Washer, 5/16-18 SS Flat
6	210-0601	2	Shoulder Bolt (Ext. Spring)
7	210-0602	2	Shoulder bolt SS 3/8 X 3/8
8	210-0903	2	5/16-18 SS Hex Nut
9	210-1005	2	Set Screw 1/2-13 x 1" Soc Cup Pt
10	210-1602	32	Screw, 5/16-18 x 1 SS SHC
11	210-1604	7	5/16-18 x 3/4 SS SHC Screw
12	210-1606	2	Screw 5/16-18x2 SS HH Tap Bolt
13	210-1607	7	Screw, SS 5/16-18 x 3/4 Button Hd
14	210-1608	4	5/16-18 x 1/2 SS SHC Screw
15	210-1802	4	Screw, 1/2-13 x 2 SS Hex Hd
16	210-2201	4	Isolator Mount, 661-30
17	210-2301	2	Helicoil 3/8-16, 11856CN375
18	230-1022	1	RB 2400 Motor Pulley
19	230-4003	1	1-5/8" Bore Taper Lock Bushing
20	230-5200K	1	Belt Kit
21	230-5600K	1	Belt Kit
22	250-0300	2	4" Port CAST Blower Housing
23	250-0300FL	2	RB1200 Blower Flange Hsg
24	250-0900	2	Band Clamp
25	275-0100	2	Stand-Off
26	275-0101	5	Stand-Off 5-3/4 Lg.
27	290-0005	1	Large Mounting Plate, RB2400
28	290-0008	1	Small Mounting Plate, RB2400
29	290-0010	1	RB2400 Support Brkt.
30	290-0200P	2	Tension Block





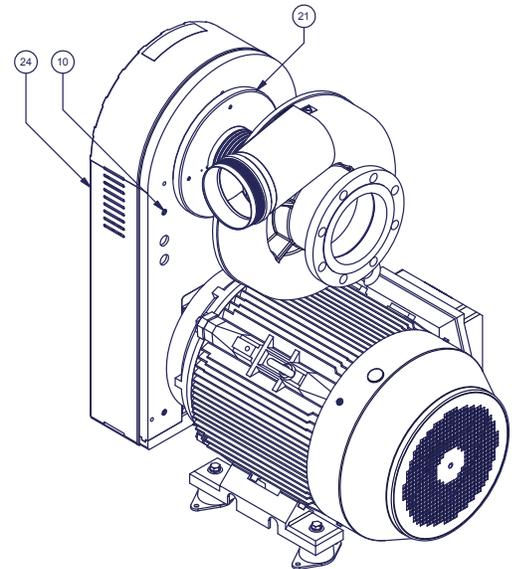
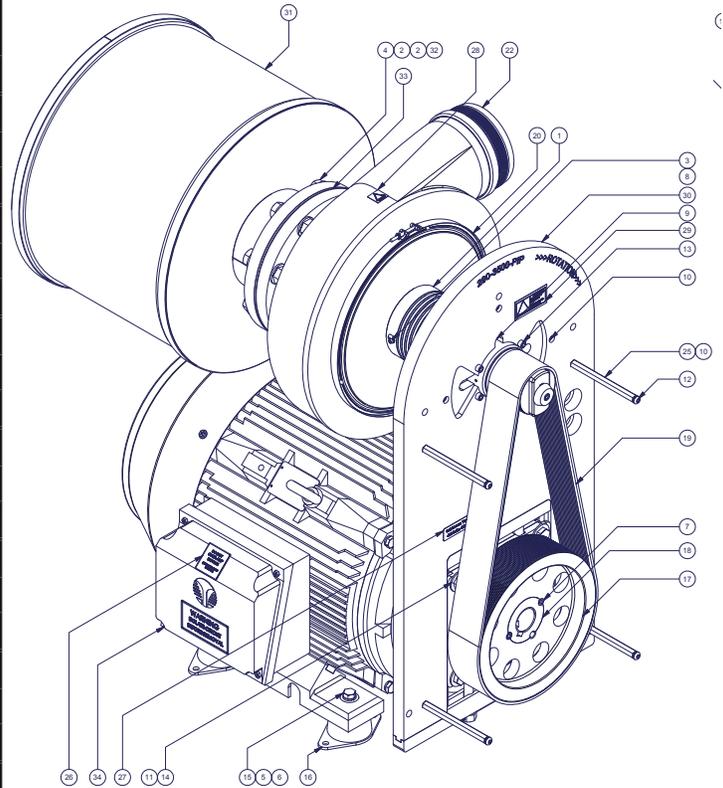
## RB4000 Exploded View

Bill of Materials			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	200-7XXX	1	RB4000 Balanced Bearing Housing Assembly
2	210-0207	1	O-Ring, Viton
3	210-0209	1	O-Ring, Viton
4	210-1005	2	Screw, 1/2-13 x 1" Soc Cup Pt
5	210-1602	2	Screw, 5/16-18 x 1 SS SHC Nylon
6	210-1603	8	Screw, 5/16-18 1-1/2 SS SHC Screw
7	210-1607	4	Screw, 5/16-18 x 3/4 SS BHCS
8	210-1615	4	Screw, 5/16-18 x 2 SS SHC
9	230-1035N	1	RB4000 Motor Pulley
10	230-4005	1	1-7/8" Bore Taper Lock Bushing
11	230-6620	1	Belt RB4000
12	250-0903	1	Clamp Band Assembly
13	250-3517	1	RB4000 Housing Plate
14	250-3518	1	RB4000 Blower Housing
15	275-3000	1	Belt Guard
16	275-3501	4	Stand-Off
17	290-3500-M	1	RB4000 Backplate, Moving Center



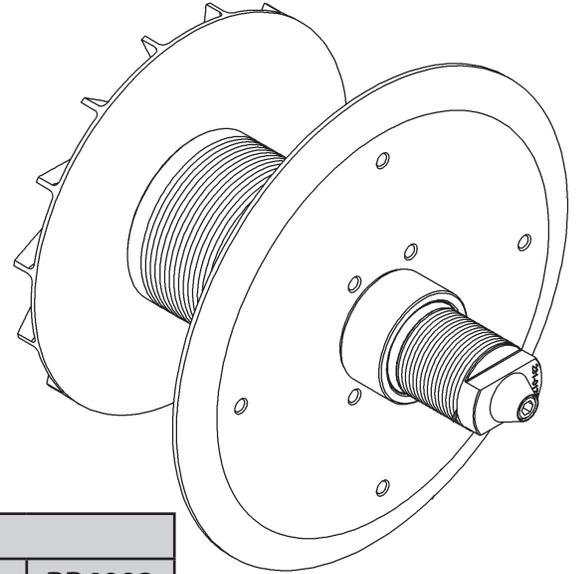
## RB4002 Exploded View

Bill of Materials			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	201-1XXX	1	RB4002 Bearing Housing
2	210-0029	16	Washer. 3/4" x 1-7/16" Flat ZP
3	210-0030	3	Cable Clamp Nylon 1/8" x #8
4	210-0031	8	Hex Bolt 3/4-10 x 3.25 ZP
5	210-0308	4	Washer, 1/2 SS Split Lock
6	210-0326	4	Washer, 1/2-13 Flat SS
7	210-1005	2	Set Screw 1/2-13 x 1" Soc Cup Pt
8	210-1301	3	Screw 8-32 x 3/8 SS SHC
9	210-1602	2	Screw, 5/16-18 x 1 SS SHC Nylok
10	210-1603	8	Screw 5/16-18 x 1 SS SHCC
11	210-1605	4	Screw, 5/8-11 Flat 188-8SS
12	210-160	4	Screw, SS 5/16-18 x 3/4 Button Hd
13	210-1615	4	Screw, 5/16-18 x 2 SS SHC
14	210-1761	4	Washer, 5/8-11 Flat 18-8SS
15	210-1802	4	Screw, 1/2-13 x 2.0 SS Hex Hd
16	210-2201	4	Isolator Mount, 661-30
17	230-1035N	1	Blower K-Section Pulley (Machined)
18	230-400X	1	Taper Lock Bushing
19	230-6620	1	Belt
20	250-0903	1	Band Clamp 14"
21	250-3539	1	Housing Plate
22	250-3540FL	1	RB4002 Volute, Unflanged Discharge
24	275-3000	1	Beltguard
25	275-3501	4	Stand-Off
26	280-0004	1	Label Over Amp 2x2 Mylar Orange
27	280-0006	1	Label Set Screw
28	280-0121	1	Decal, Hot Surface
29	280-0124	1	Decal, Caution, Moving Parts
30	290-3500-M	1	Backplate, Moving Center
31	340-2070	1	Inlet Filter Assembly
32	750-0004	8	Nut, 3/4-10 ZP H
33	910-0184	1	6" Flg Gasket
34	Motor - C-Face	1	Motor





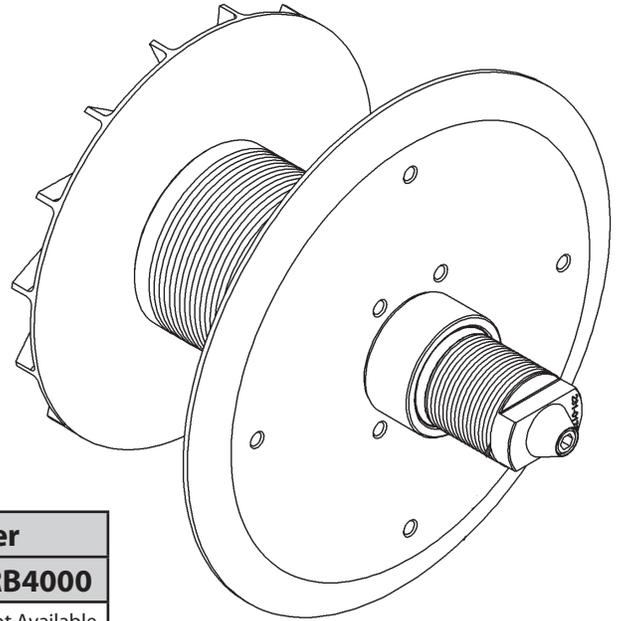
## Balanced Bearing Housing Assembly



Blower Pulley	Bearing Housing Assembly Part Number					
	RB500	RB800/1200HC/2400	RB2000	RB4000	RB4002	
231-1005	200-8105	Not Available	Not Available	Not Available	Not Available	
231-1015	200-8115					
231-1025	200-8125					
231-1035	200-8135					
231-0145	200-8145					
231-0155	200-8155					
231-0165	200-8165					
231-0175	200-8175	200-9145	200-9155	200-9165	200-9175	200-2175
231-0185	Not Available	200-9185	200-9175	200-2175		
231-0195		200-9185	200-2185			
231-0205		200-9195	200-2195			
231-0215		200-9205	200-2205			
231-0225		200-9215	200-2215			
231-0225		200-9225	200-2225			
231-0235		200-9235	200-2235		201-1235	
231-0245		200-9245	Not Available		201-1245	
231-0255		200-9255			201-1255	
231-0265		200-9265			Not Available	
231-0275		200-9275		200-7275	201-1275	
231-0285		200-9285		Not Available	Not Available	
231-0295		200-9295		200-7295	201-1295	
231-0305		Not Available	Not Available	Not Available	Not Available	
231-0315				200-7315	201-1315	
231-0325				Not Available	Not Available	
231-0335				200-7335	201-1335	
231-0345				Not Available	Not Available	
231-0355				200-7355	201-1355	
231-0365				Not Available	Not Available	
231-0375	200-7375			201-1375		
231-0385	Not Available			Not Available		
231-0395	200-7395			201-1395		

Note: Bearing Housing Assembly sold as a balanced unit with specified pulley.

## Water-Cooled Balanced Bearing Housing Assembly

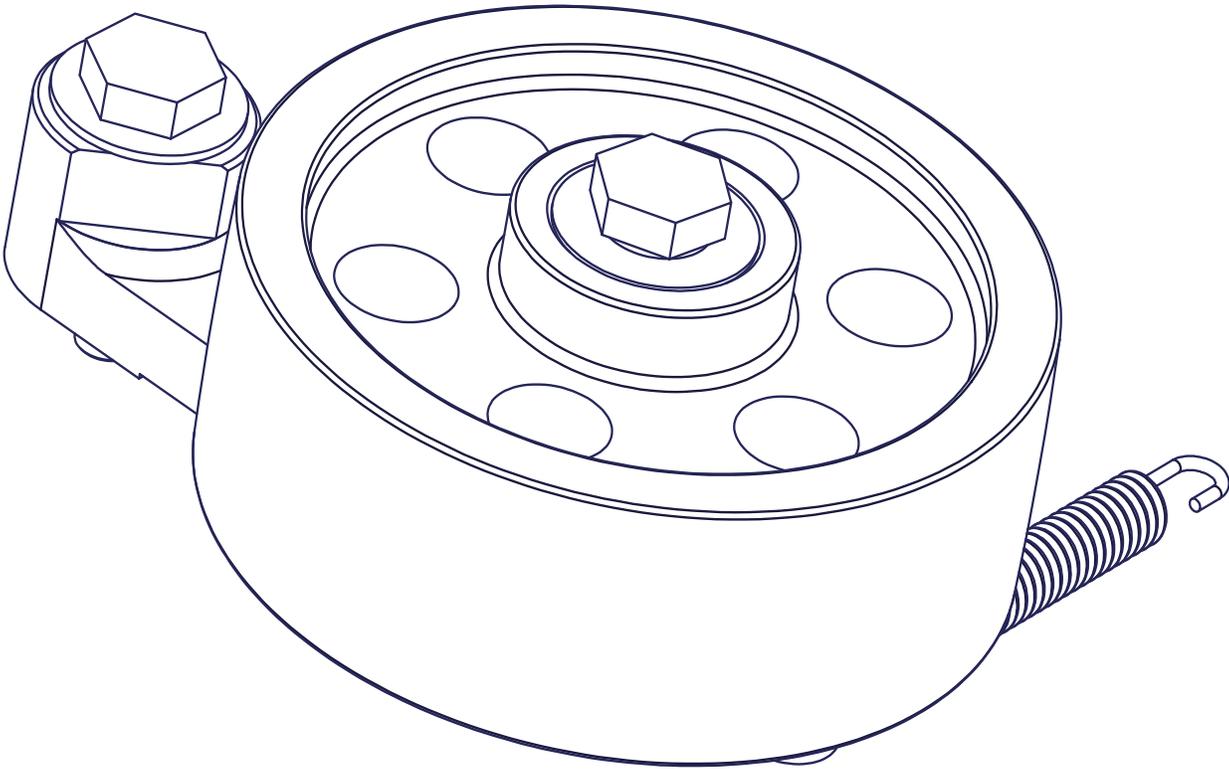


Blower Pulley	Bearing Housing Assembly Part Number				
	RB500	RB800/1200HC/2400	RB2000	RB4000	
231-1005	200-8105WC	Not Available	Not Available	Not Available	
231-1015	200-8115WC				
231-1025	200-8125WC				
231-1035	200-8135WC				
231-0145	200-8145WC	200-9145WC			
231-0155	200-8155WC	200-9155WC			
231-0165	200-8165WC	200-9165WC			
231-0175	200-8175WC	200-9175WC			200-2175WC
231-0185	Not Available	200-9185WC			200-2185WC
231-0195		200-9195WC			200-2195WC
231-0205		200-9205WC	200-2205WC		
231-0215		200-9215WC	200-2215WC		
231-0225		200-9225WC	200-2225WC		
231-0235		200-9235WC	200-2235WC		
231-0245		200-9245WC	Not Available	200-7275WC	
231-0255		200-9255WC		Not Available	
231-0265		200-9265WC		200-7295WC	
231-0275		200-9275WC		Not Available	
231-0285		200-9285WC	Not Available	200-7315WC	
231-0295		200-9295WC		Not Available	
231-0305		Not Available		200-7335WC	
231-0315				Not Available	
231-0325	200-7355WC				
231-0335	Not Available				
231-0345	200-7375WC				
231-0355	Not Available				
231-0365	200-7395WC				
231-0375	Not Available				
231-0385	Not Available				
231-0395	Not Available				

Note: Bearing Housing Assembly sold as a balanced unit with specified pulley.



# Tension Pulley Assembly



## Drive Belt Information

### RB500/RB4000/RB4002 Belt Information

Republic utilizes a 16-groove belt on the RB500 and a 20-groove belt on the RB4000/RB4002 and has the part number stamped on the flat side of the belt. Republic recommends that you keep spare belts in stock. It is also recommended that replacement belts be purchased from Republic Manufacturing or a Republic distributor to ensure that belt quality and blower performance are maintained. Belts do vary from manufacturer to manufacturer, and all Republic belts are inspected for belt thickness and imperfections prior to shipment.

### RB500/RB4000/RB4002 Replacement Parts Reference

Blower	Belt Part No.	Belt Replacement Tool
RB500	230-5850	210-0111
RB4000/RB4002	230-6620	Not Required



## RB800/1200HC/RB2000 Belt Information

Republic utilizes a 16-groove belt on the RB800, RB1200HC, and RB2000 and has the part number stamped on the flat side of the belt. Republic recommends that you keep spare belts in stock. It is also recommended that replacement belts be purchased from Republic Manufacturing or a Republic distributor, to ensure that belt quality and blower performance are maintained. Belts do vary from manufacturer to manufacturer, and all Republic belts are inspected for belt thickness and imperfections prior to shipment.

### Belt Sizing Information

Please find the part number stamped on the face of the small stainless steel blower pulley, and then refer to the following chart for the correct belt size.

### RB800/RB1200HC/RB2000 Replacement Parts Reference

Blower Pulley Part No.			Belt Part No.			Tension Pulley Part No.		
RB800	RB1200HC	RB2000	RB800	RB1200HC	RB2000	RB800	RB1200HC	RB2000
231-1045	Not Available	Not Available	230-3800K	Not Available	Not Available	200-0214	200-0206	Not Available
231-0155	231-0155	231-0155	230-3800K	230-4600K	230-4600K	200-0214	200-0206	200-0206
231-0165	231-0165	231-0165	230-3800K	230-4600K	230-4600K	200-0214	200-0206	200-0206
231-0175	231-0175	231-0175	230-3800K	230-4700K	230-4700K	200-0214	200-0206	200-0206
231-0185	231-0185	231-0185	230-3800K	230-4700K	230-4700K	200-0214	200-0206	200-0206
231-0195	231-0195	231-0195	230-3800K	230-4700K	230-4700K	200-0214	200-0206	200-0206
231-0205	231-0205	231-0205	230-3800K	230-4700K	230-4700K	200-0214	200-0206	200-0206
231-0215	231-0215	231-0215	230-3900K	230-4700K	230-4700K	200-0214	200-0206	200-0206
231-0225	231-0225	231-0225	230-3900K	230-4700K	230-4700K	200-0214	200-0206	200-0206
231-0235	231-0235	231-0235	230-3900K	230-4700K	230-4700K	200-0214	200-0206	200-0206
231-0245	231-0245	231-0245	230-3900K	230-4700K	230-4700K	200-0214	200-0206	200-0206
231-0255	231-0255	231-0255	230-3900K	230-4800K	230-4800K	200-0214	200-0206	200-0206
231-0265	231-0265	231-0265	230-3900K	230-4800K	230-4800K	200-0214	200-0206	200-0206
231-0275	231-0275	231-0275	230-3950K	230-4800K	230-4800K	200-0214	200-0206	200-0206
231-0285	231-0285	231-0285	230-3950K	230-4900K	230-4900K	200-0214	200-0206	200-0206
231-0295	231-0295	231-0295	230-3950K	230-4900K	230-4900K	200-0214	200-0206	200-0206

**Important:** Replace spring with every belt replacement to ensure proper tension on your new belt. The following pages should show the proper procedures for belt installation and removal and for spring replacement.

## RB2400 Belt Information

Republic utilizes a 16-groove belt on the RB2400 and has the part number stamped on the flat side of the belt. Republic recommends that you keep spare belts in stock. It is also recommended that replacement belts be purchased from Republic Manufacturing or a Republic distributor, to ensure that belt quality and blower performance are maintained. Belts do vary from manufacturer to manufacturer, and all Republic belts are inspected for belt thickness and imperfections prior to shipment.

The RB2400 model comes equipped with two (2) blower heads and may require a combination of Tension Pulley Assemblies. When looking at the belt side or the belt guard side of this blower, the left side head is called and engraved with the letters "H1" and the right side head is called and engraved with the letters "H2". The center distance of the motor pulley and blower pulley shaft on the "H1" side is slightly shorter than the "H2" side.

In order for the proper belt sizes to function on this blower, the combination of 4 inch (101.6 mm) and 5 (127 mm) inch (Tension Pulley assemblies were incorporated. Use the chart below to find which Tension Pulley is required on either the "H1" side or "H2" side of the blower.

## RB2400 Replacement Parts Reference

Blower Pulley Part No.	Belt Part No.		Tension Pulley Part No.	
	RB2400 H1 Side	RB2400 H2 Side	RB2400 H1 Side	RB2400 H2 Side
231-0155	230-5100K	230-5500K	200-0206	200-0214
231-0165	230-5200K	230-5500K	200-0206	200-0214
231-0175	230-5200K	230-5500K	200-0206	200-0214
231-0185	230-5200K	230-5600K	200-0206	200-0206
231-0195	230-5200K	230-5600K	200-0206	200-0206
231-0205	230-5200K	230-5600K	200-0206	200-0206
231-0215	230-5200K	230-5600K	200-0214	200-0206
231-0225	230-5200K	230-5600K	200-0206	200-0206
231-0235	230-5200K	230-5600K	200-0206	200-0206
231-0245	230-5300K	230-5200K	200-0206	200-0206
231-0255	230-5300K	230-5200K	200-0214	200-0214
231-0265	230-5300K	230-5600K	200-0214	200-0214
231-0275	230-5300K	230-5600K	200-0214	200-0214
231-0285	230-5300K	230-5800K	200-0214	200-0206
231-0295	230-5300K	230-5800K	200-0214	200-0206

200-0206 = 5" Tension Pulley Assembly

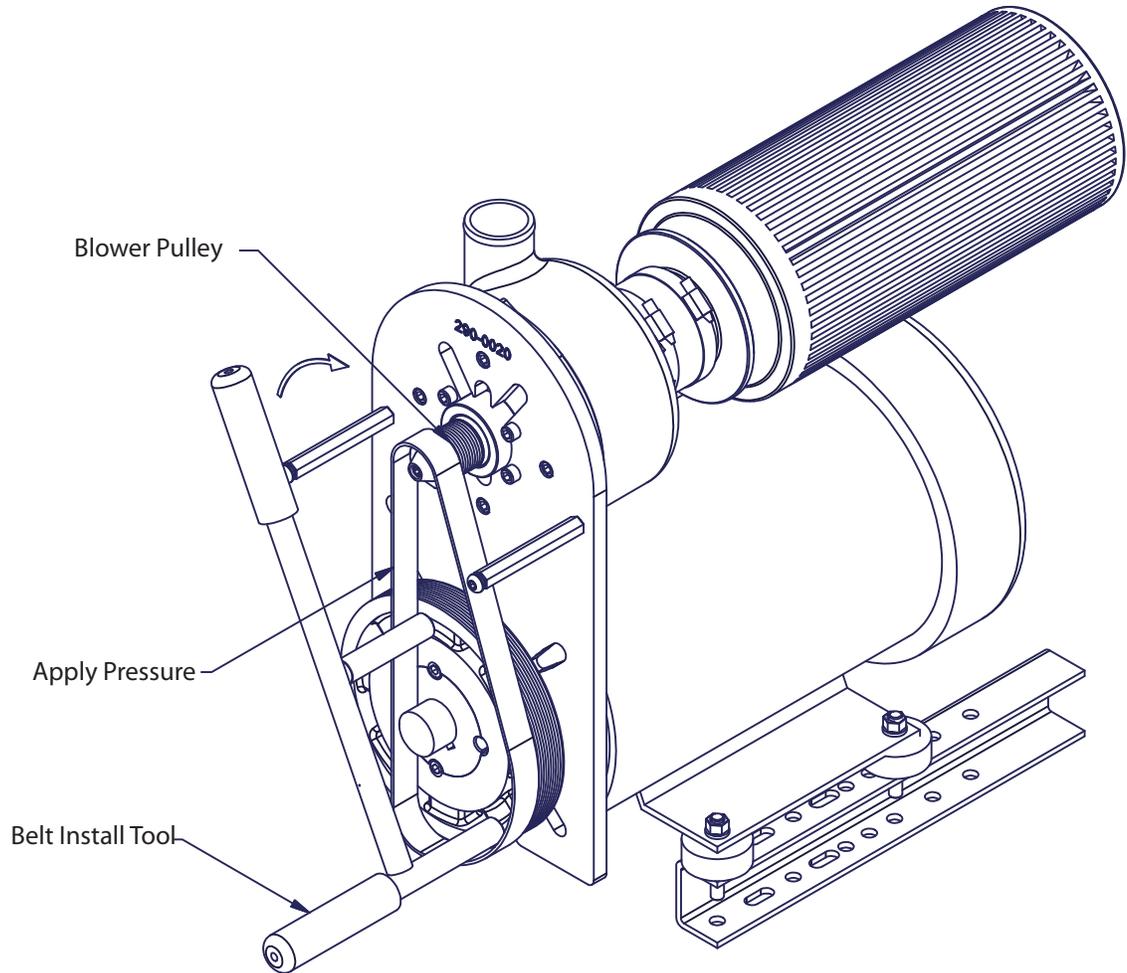
200-0214 = 4" Tension Pulley Assembly



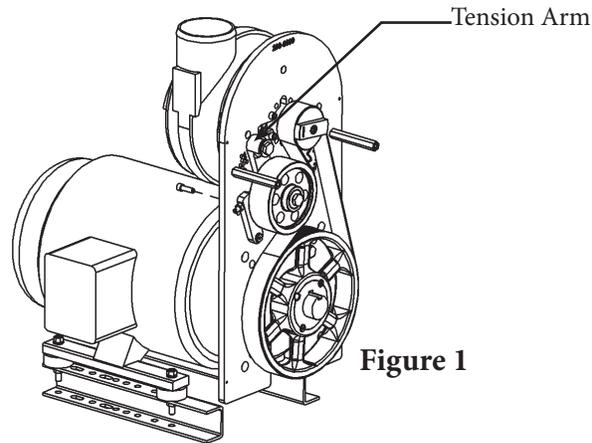
## RB500 Belt Replacement Procedure

(May be performed by untrained personnel)

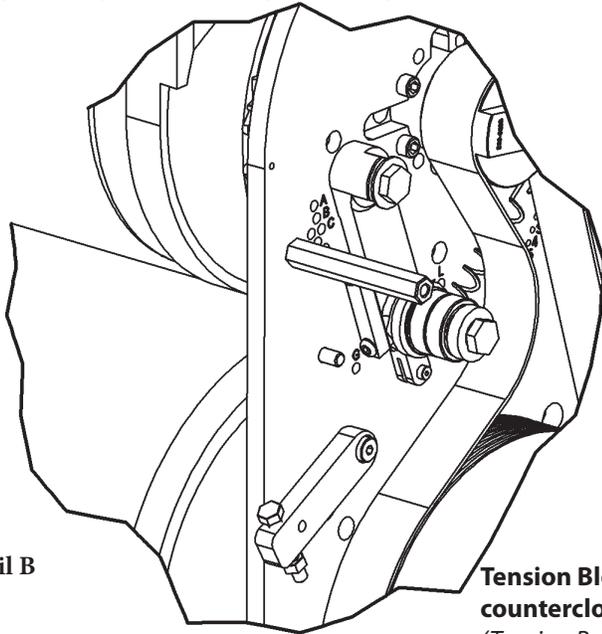
1. Position belt around the top of the blower pulley and hold firm.
2. Position belt around bottom half of motor pulley and hold firm.
3. Position belt installation tool in motor pulley.
4. Rotate motor pulley while applying pressure to the belt by hand to “walk” the belt onto both pulleys until grooves are aligned.



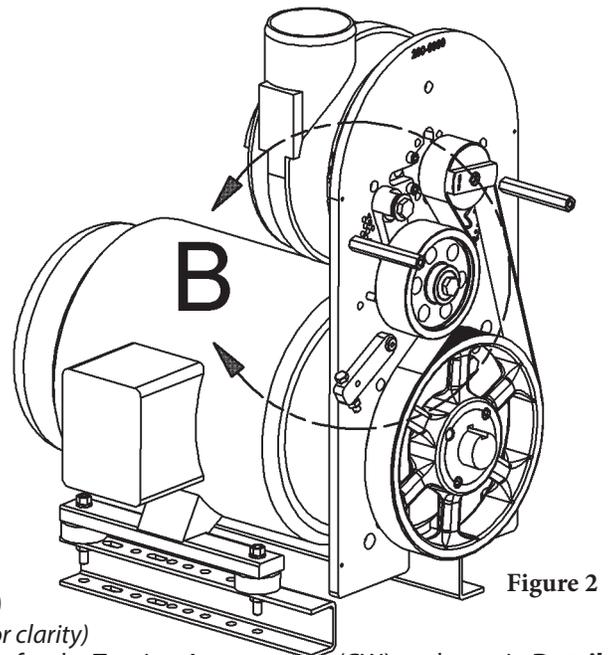
## RB800/RB1200HC/RB2000/RB2400 Belt Replacement Procedure



In order to remove or replace the Belt, the Tension Block Assembly must be rotated out of the way to allow for the Tension Arm to swing (CW). Loosen the 5/16-18 SHCS as shown in **Figure 1**, the screw is located on the backside of the Mounting Plate. Use a 1/4 inch (6.35 mm) allen wrench (not shown) on the 5/16-18 SHCS.



**Tension Block rotated counterclockwise (CCW)**  
*(Tension Pulley removed for clarity)*



Once the 5/16-18 SHCS is removed, rotate the Tension Block (CCW) to allow for the Tension Arm to swing (CW) as shown in **Detail B**.

**Note:** The same belt removal and installation procedure applies for the RB2400 model with one exception—there are two (2) belts.

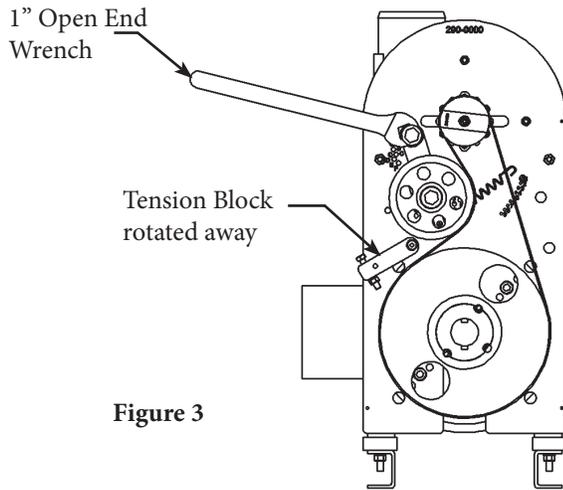


Figure 3

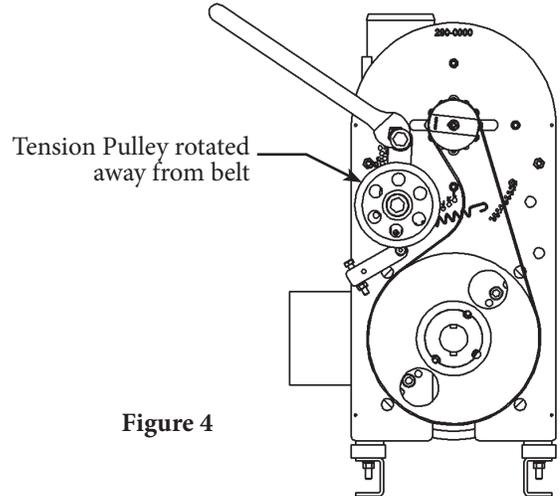


Figure 4

Using a 1 inch (25.4 mm) open-end wrench, as shown in **Figures 3 and 4**, rotate the Tension Arm Assembly clockwise (CW) and remove the Belt. You may release the pressure on the wrench and allow the Tension Arm to swing back into position once the Belt has been removed.

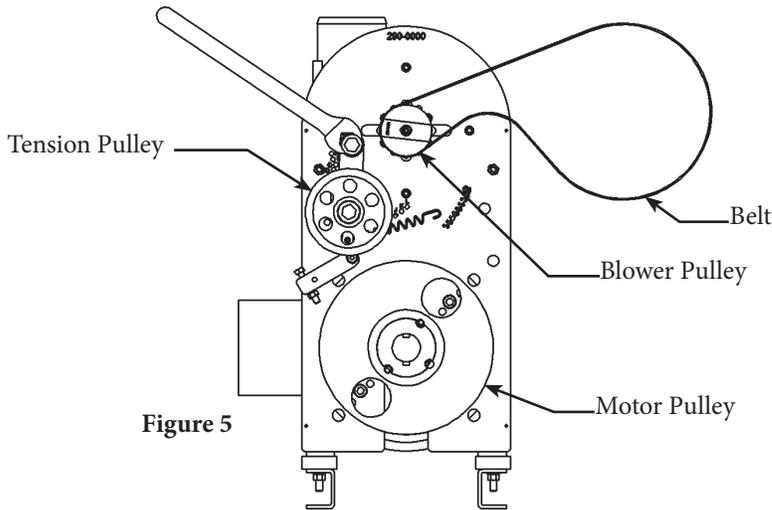


Figure 5

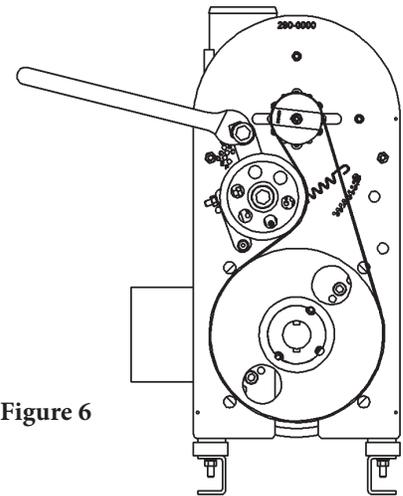


Figure 6

Using a 1 inch (25.4 mm) open-end wrench, rotate the Tension Arm Assembly clockwise (CW). Wrap the new or replacement Belt around the Blower Pulley and then onto the Motor Pulley as shown in **Figures 5 and 6**. Once the Belt is in place and the wrench is removed, verify that the Belt is seated into all the grooves on both pulleys by manually rotating the Motor Pulley (large pulley), and checking the alignment of the Belt on the groves.

Note: The same belt removal and installation procedure applies for the RB2400 Model with one exception—there are two (2) belts.

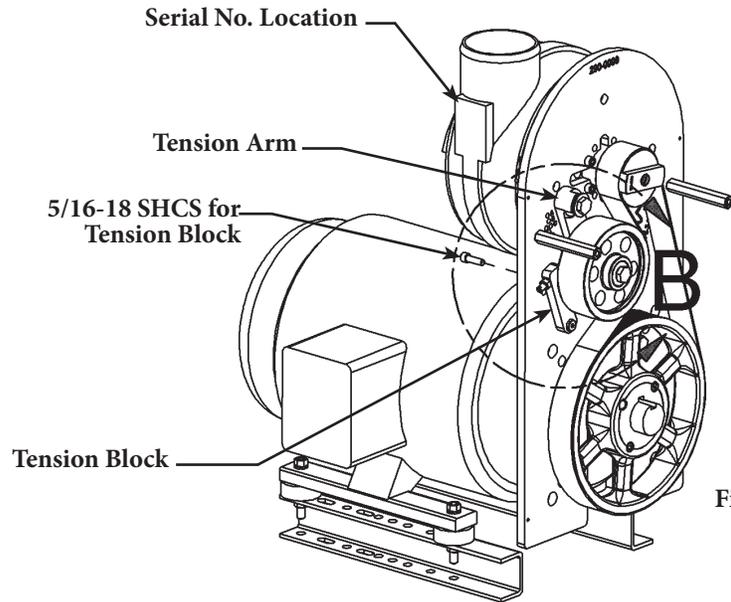


Figure 7

Rotate the Tension Block (CW) back into position and reinstall 5/16-18 SHCS through the back side of the Mounting Plate using a 1/4 inch (6.35 mm) allen wrench.

Note: The Tension Block is not to be used for tensioning the belt. The purpose of the Tension Block is to help control the Tension Arm “backlash” on motors with high starting torque.

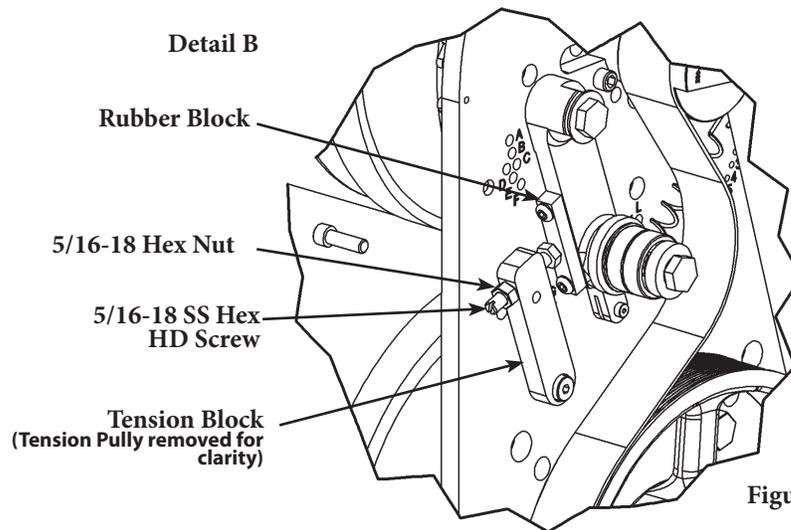
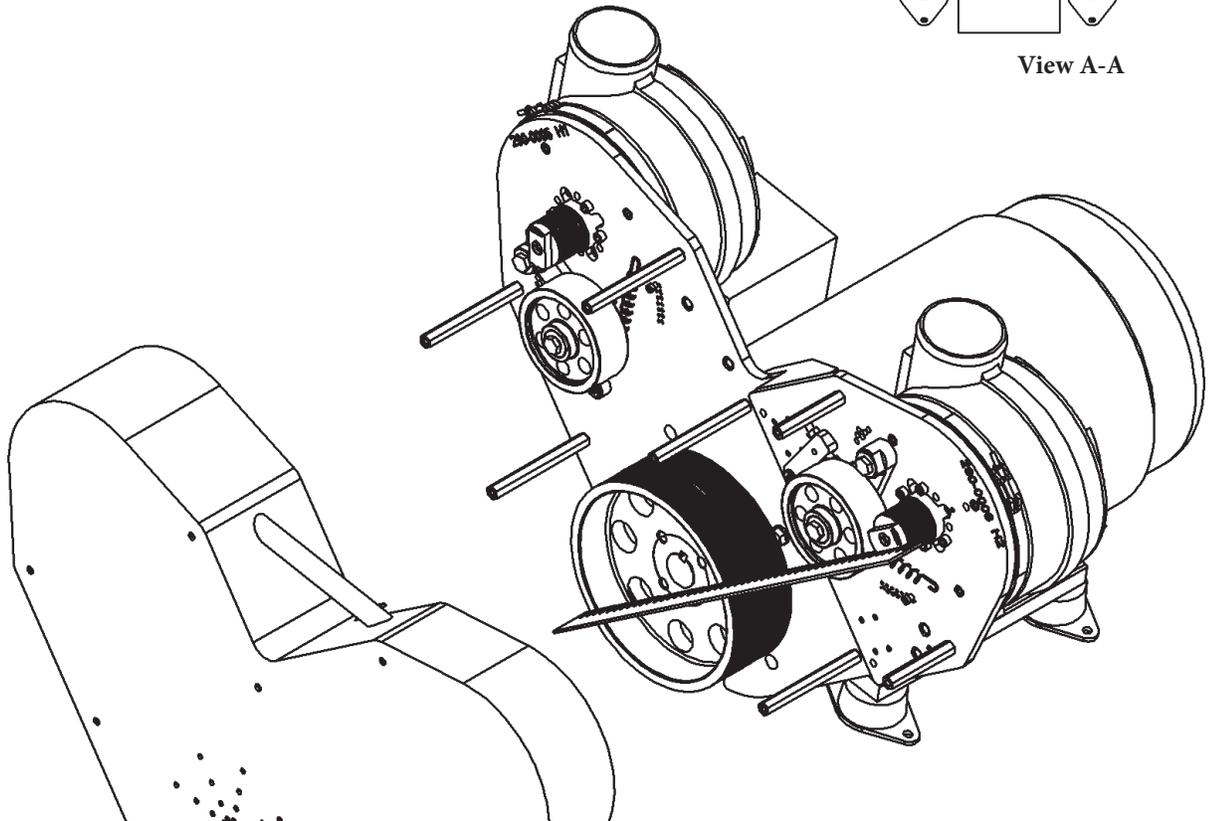
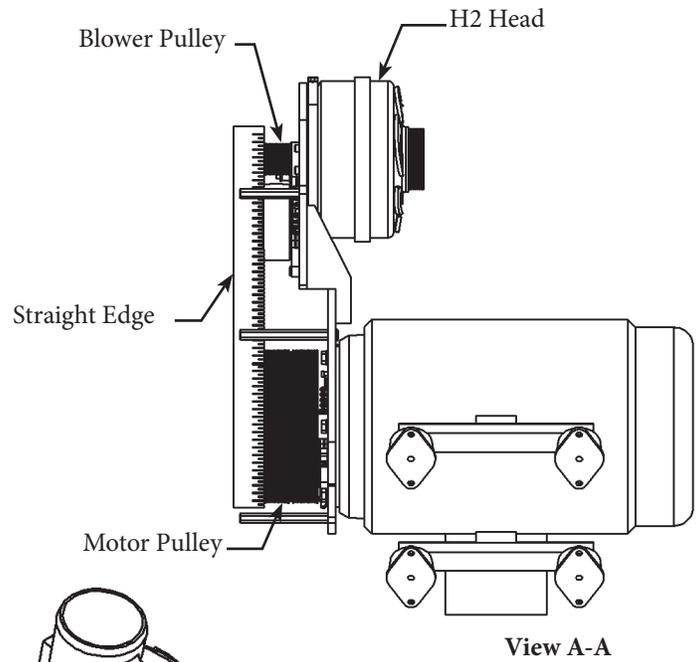
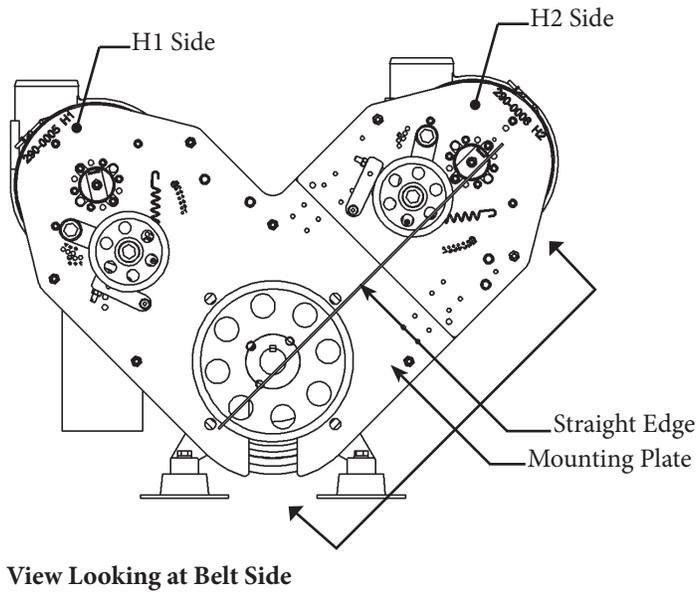


Figure 8

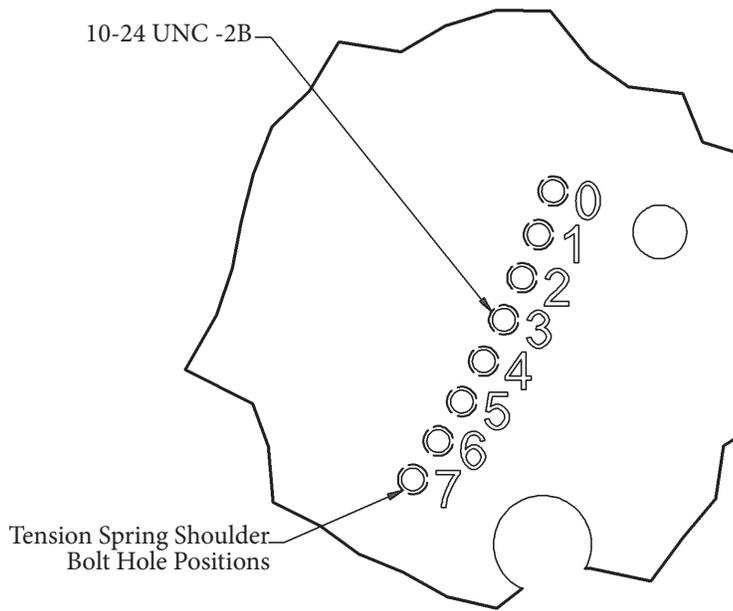
Using a flat blade screwdriver, adjust the slotted 5/16-18 SS Hex Head screw on the Tension Block until the Hex Head has 1/4” (6mm) clearance from the Rubber Block on the Tension Arm assembly. Tighten jam nut with a 1/4 inch (6.35 mm) wrench and reinstall the belt guard cover.

Note: The hex head screw is not designed to put additional pressure on the Tension Arm or Belt, it is intended to prevent the backward movement of high torque motors.

Note: The same belt removal and installation procedure applies for the RB2400 Model with one exception—there are two (2) belts.



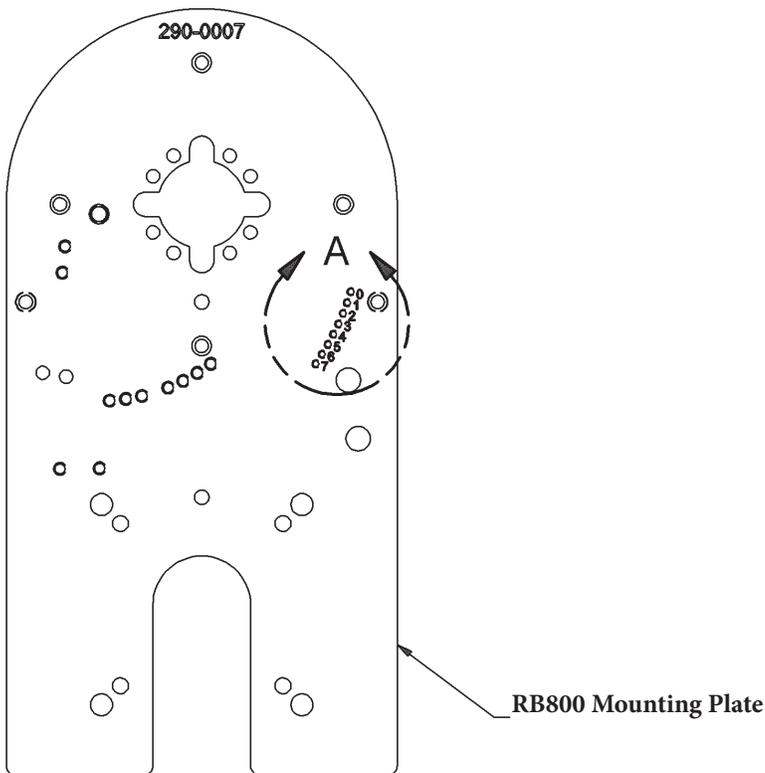
See the Motor Pulley section for instructions on installation, removal and alignment of motor pulley.  
See the Drive Belt section for instructions and installation, removal and alignment of belt.  
Use the "H2" Blower Pulley to align the RB2400 Motor Pulley.

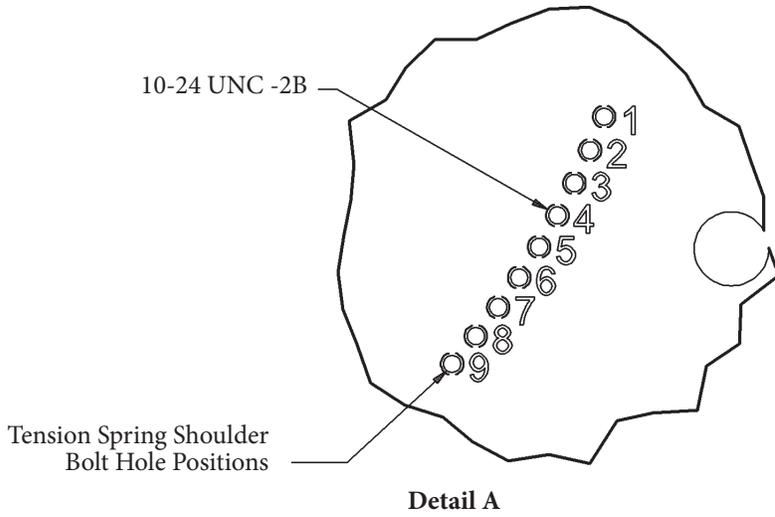


**Detail A**

**Tension Spring Bolt Position Chart**

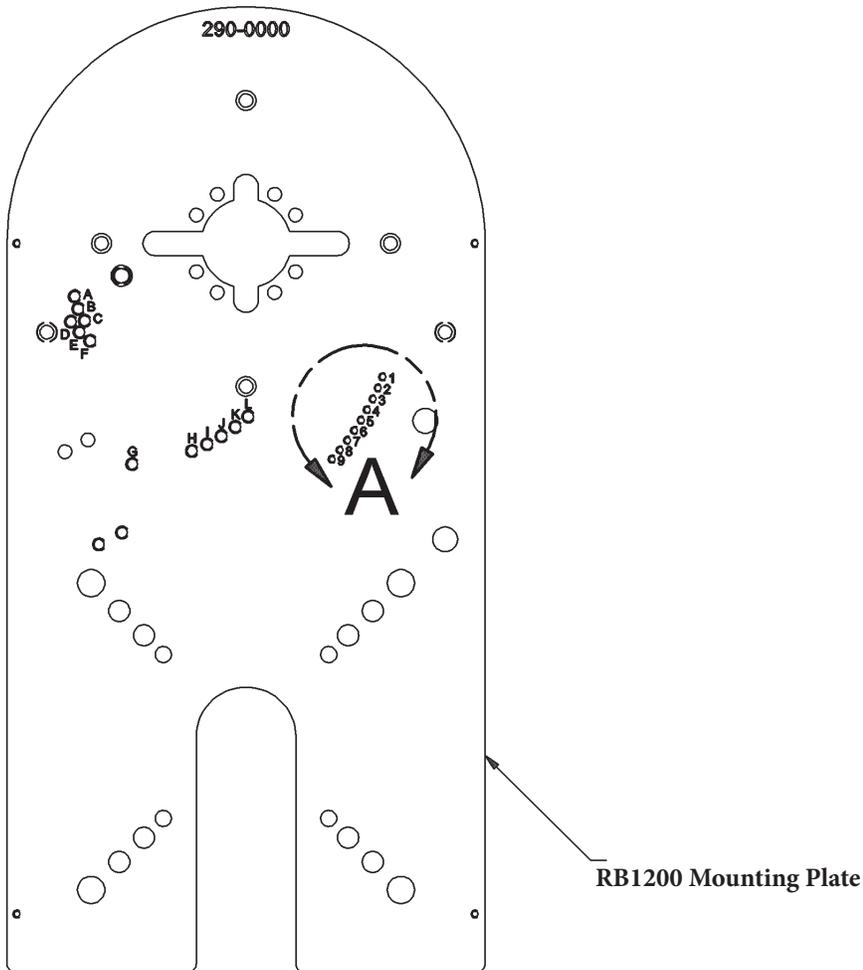
<b>Pulley</b>	<b>RB800 Belt</b>	<b>RB800 Position</b>
230-0145 231-0145	230-3800	1
230-0155 231-0155	230-3800	2
230-0165 231-0165	230-3800	3
230-0175 231-0175	230-3800	4
230-0185 231-0185	230-3800	5
230-0195 231-0195	230-3800	6
230-0205 231-0205	230-3800	7
230-0215 231-0215	230-3900	0
230-0225 231-0225	230-3900	0
230-0235 231-0235	230-3900	1
230-0245 231-0245	230-3900	2
230-0255 231-0255	230-3900	3
230-0265 231-0265	230-3900	3
230-0275 231-0275	230-3950	0
230-0285 231-0285	230-3950	1
230-0295 231-0295	230-3950	2





**Tension Spring Bolt Position Chart**

Pulley	RB1200 Belt	RB1200 Position
230-0175 231-0175	230-4700	1
230-0185 231-0185	230-4700	2
230-0195 231-0195	230-4700	3
230-0205 231-0205	230-4700	4
230-0215 231-0215	230-4700	4
230-0225 231-0225	230-4700	5
230-0235 231-0235	230-4700	6
230-0245 231-0245	230-4700	7
230-0255 231-0255	230-4800	2
230-0265 231-0265	230-4800	3
230-0275 231-0275	230-4800	4
230-0285 231-0285	230-4900	2
230-0295 231-0295	230-4900	3

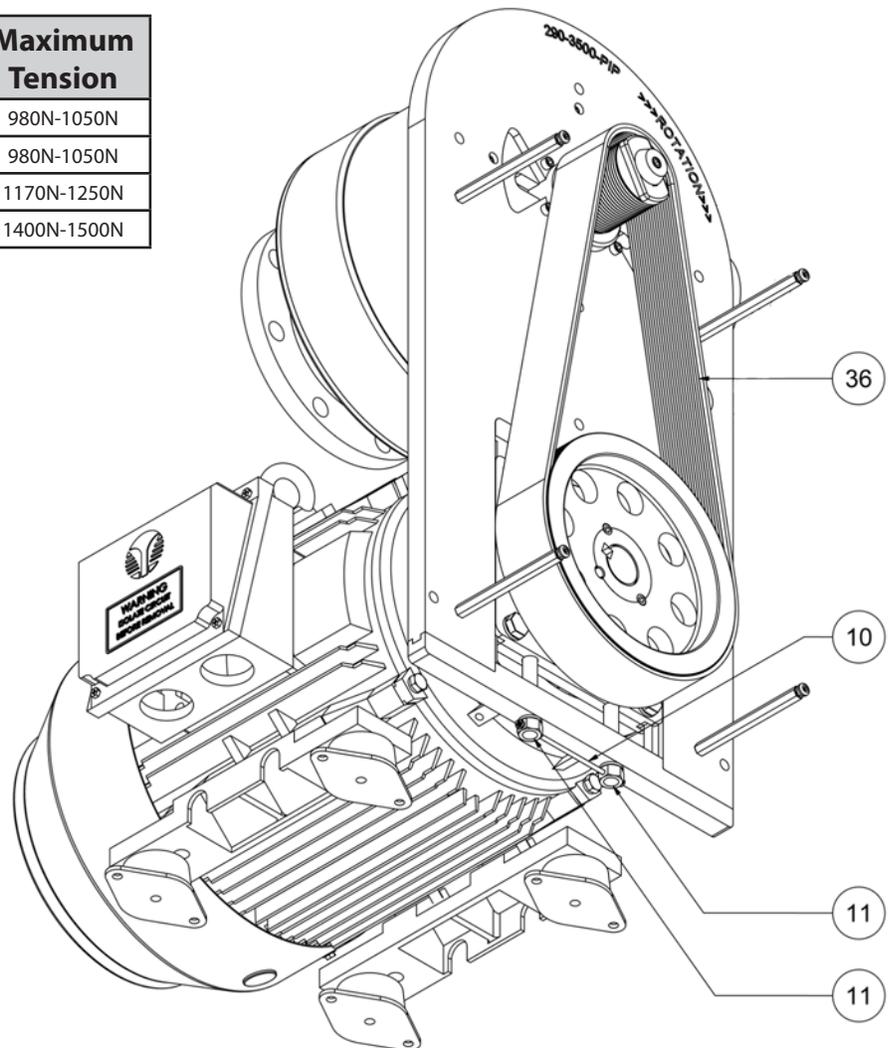


## RB4000/RB4002 Belt Replacement Procedure

(May be performed by untrained personnel)

1. Remove washer and nut that secure locking pin (10).
2. Remove locking pin (10).
3. Turn bolts (11) to the left evenly such that the moving carrier plate slides down. Belt (36) should now be loose, and remove belt (36).
4. Install new belt (36). Position belt (36) such that it is perfectly aligned on the grooves of the blower pulley and motor pulley.
5. Turn bolts (11) to the right such that the moving carrier plate slides up and belt (36) begins to tighten. Continue turning until belt tension is measured to 75 Hz by a tension meter.
6. Replace locking pin (10) and secure with washer and nut previously removed.
7. Turn blower on and run blower for 1-2 minutes. The belt will loosen considerably.
8. Turn blower off and repeat steps 3-5 but tighten to a reading of 70 Hz.
9. Turn blower on and run blower for 15-30 minutes.
10. Turn blower off and perform final tension check to frequency listed in chart based on motor horsepower.
11. Mark backplate and carrier plate with final positions.

HP	Frequency	Minimum Tension	Maximum Tension
40	58-60 Hz	890N	980N-1050N
50	58-60 Hz	890N	980N-1050N
60	64-66 Hz	1060N	1170N-1250N
75	68-70 Hz	1260N	1400N-1500N





## Tension Pulley Replacement Procedure

(May be performed by untrained personnel)

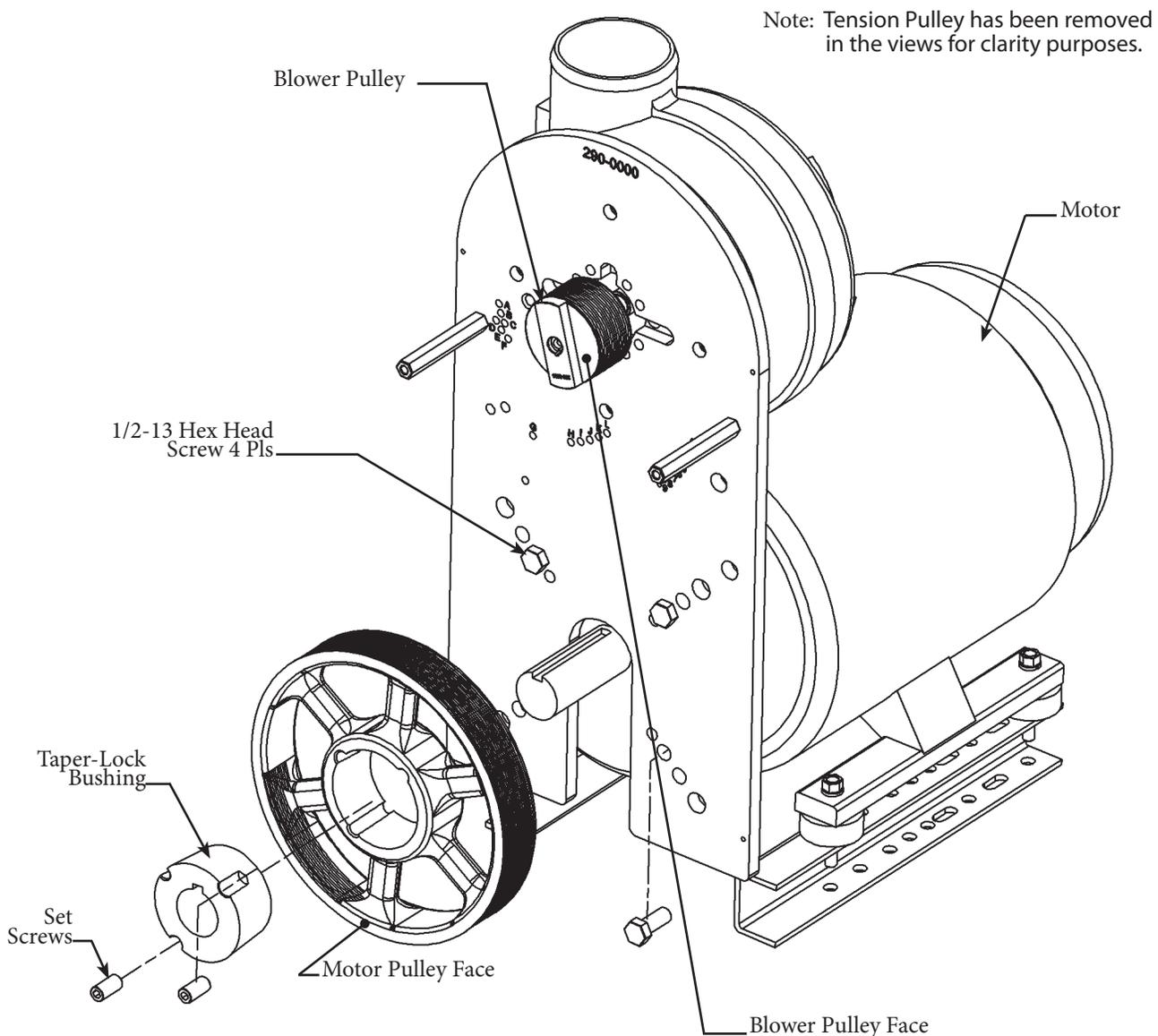
1. Place screw from the back of the backplate through to the front of the backplate (blower housing side).
2. Use a torque wrench to tighten the screw to 45 ft/lb.
3. Place spring on the shoulder bolt as needed per tension chart below.
4. Install belt using belt installation instructions.
5. Determine correct tension screw position based on chart below.
6. Flip the tension block up, and insert screw from blower housing side of backplate.
7. Tighten the screw until it touches the red block.

**Note:** Screw position numbers can be found on the backplate.

Blower Pulley	Screw Position			
	RB800	RB1200HC/RB2000	RB2400	
			H1	H2
230-0125	6	4	N/A	N/A
230-0135	7	5	N/A	N/A
231-0145	1	6	4	3
231-0155	2	7	5	4
231-0165	3	8	1	5
231-0175	4	1	2	6
231-0185	5	2	3	0
231-0195	6	3	4	1
231-0205	7	4	5	2
231-0215	0	4	5	3
231-0225	0	5	6	4
231-0235	1	6	6	5
231-0245	2	7	7	6
231-0255	3	2	7	2
231-0265	3	3	N/A	N/A
231-0275	N/A	4	N/A	N/A
231-0185	N/A	2	N/A	N/A
231-0295	N/A	3	N/A	N/A

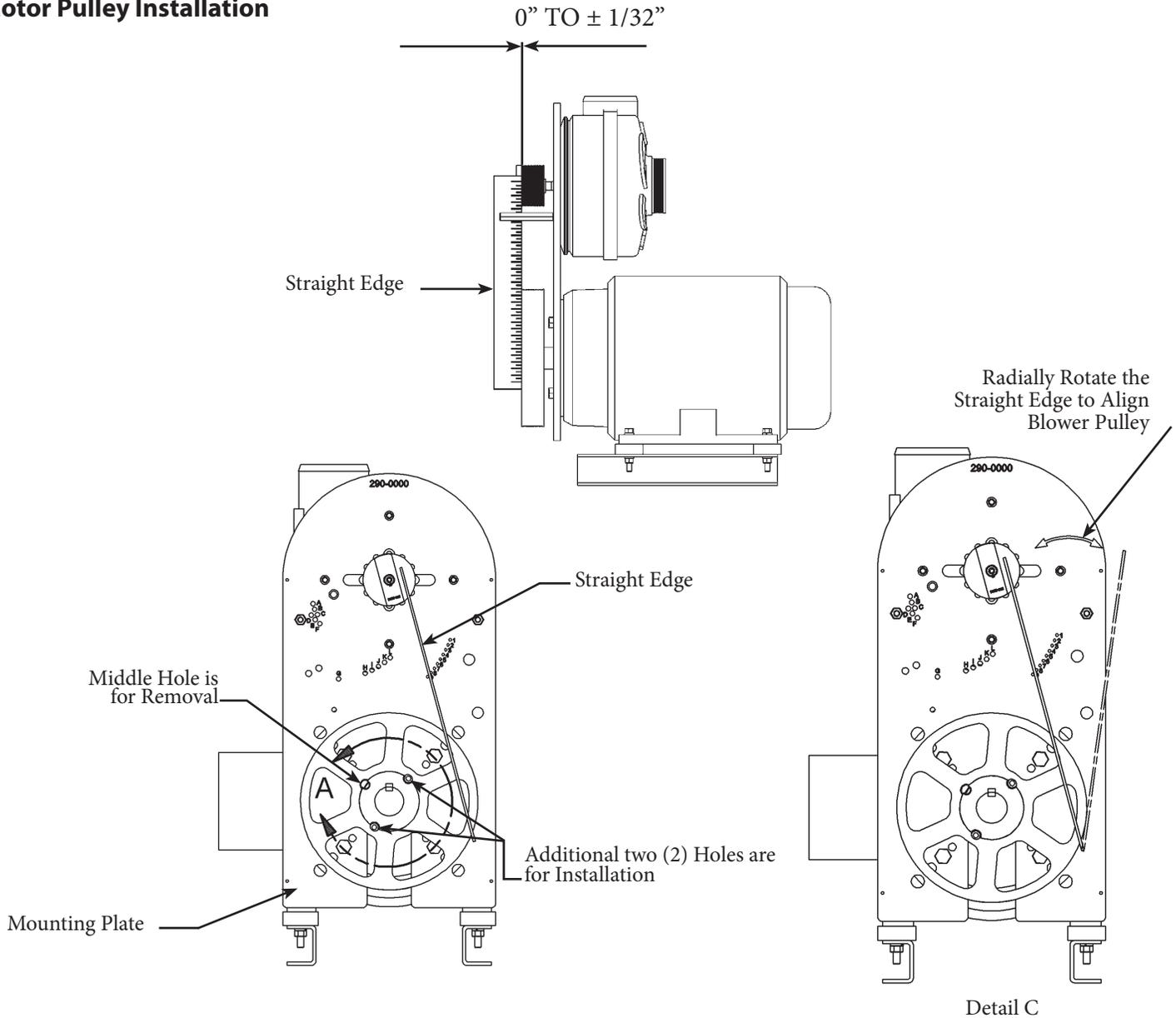
## Motor Pulley Information

- ▲ When installing a new motor pulley or servicing your existing unit, make sure that the outer grooves on both the motor pulley and blower pulley are not damaged, nicked or dinged.
- ▲ Damaged pulley grooves can cause premature belt failures or higher than normal levels of vibration.
- ▲ Be sure to use a torque wrench when installing the motor pulley.
- ▲ Torque the set screws to 36 ft./lbs. (5m/kg) or 430 in./lbs. (5000mm).
- ▲ Torque the set screws evenly to ensure proper alignment.





## Motor Pulley Installation



### Motor Pulley Installation Procedure:

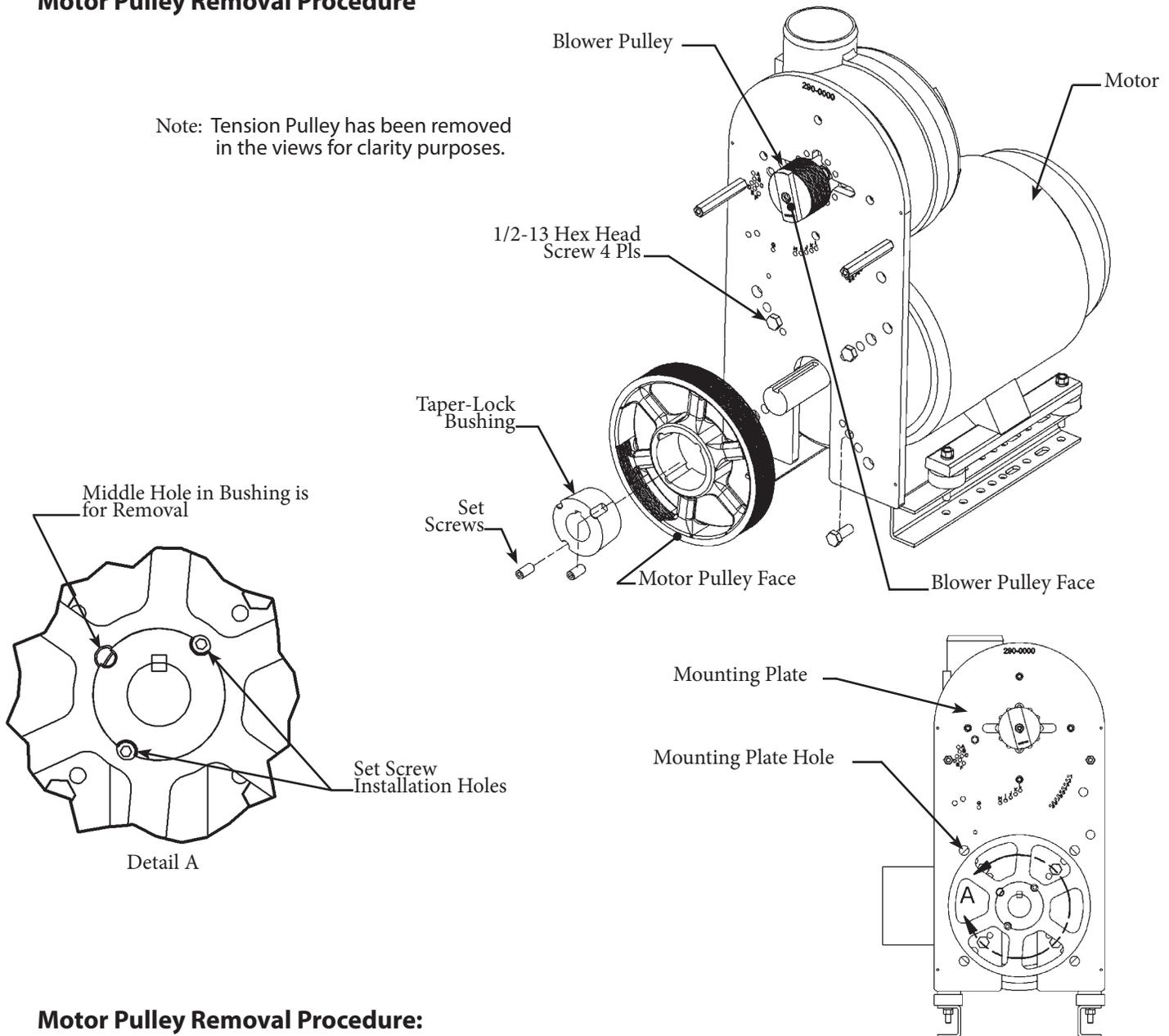
(May be performed by untrained personnel)

1. Install bushing into motor pulley with set screws. Then install the motor pulley assembly onto the motor's shaft.
2. Use a straight edge to align the motor pulley face with the blower pulley face. **Alignment must be within 0 inch to  $\pm 1/32$  inch** (0 mm to  $\pm .792$  mm). The straight edge must be able to rotate radially and lay flush on two faces of the motor pulley while lying flush on the face of the blower pulley to insure proper alignment (*see Detail C*).
3. Insert a screw driver through one of the motor pulley's and mounting plate's holes to keep the motor pulley from rotating while tightening the set screws.
4. Using a torque wrench, set the torque to 36 ft./lbs. (5m/kg) and then torque the set screws equally.

**Note:** This same motor pulley installation procedure applies to the RB2400 Blower.

## Motor Pulley Removal Procedure

Note: Tension Pulley has been removed in the views for clarity purposes.



### Motor Pulley Removal Procedure:

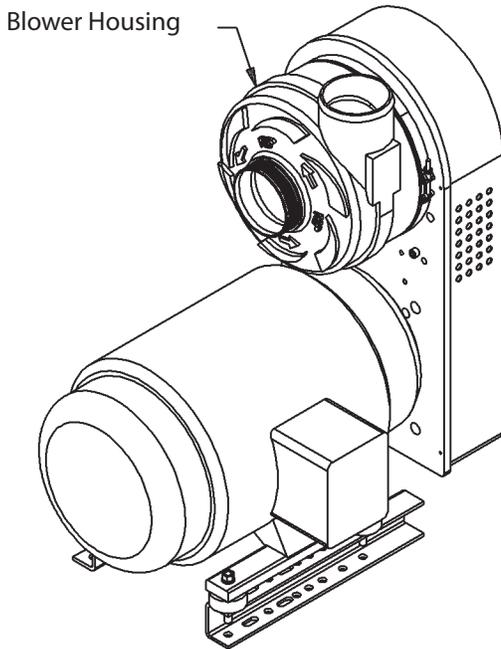
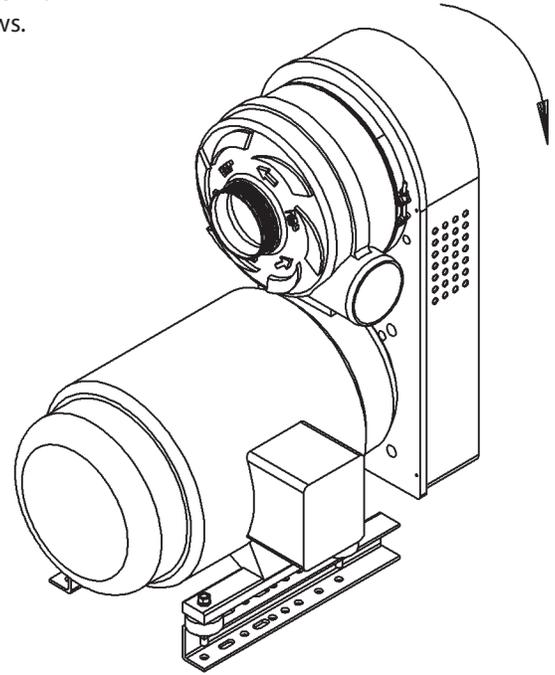
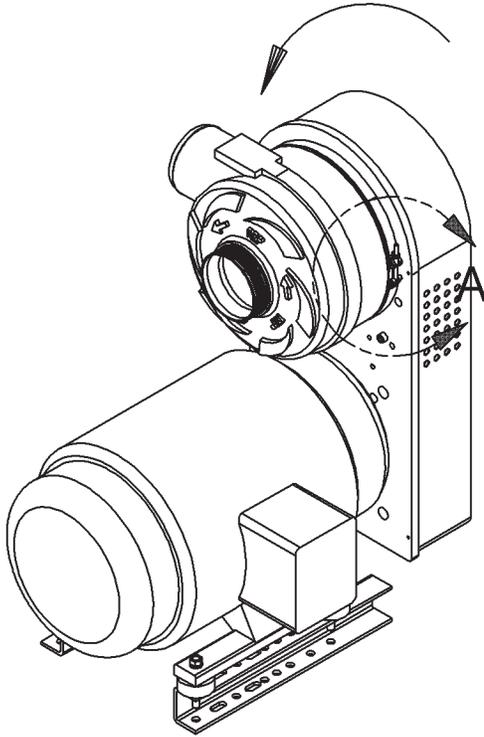
(May be performed by untrained personnel)

1. Line up one motor pulley hole to mounting plate hole and insert a screw driver through, restricting the motor pulley rotation.
2. Use a 1/4 inch (6.35 mm) Allen wrench and remove the two (2) set screws from the motor pulley and bushing.
3. Insert one of the removed set screws into the top middle hole of the bushing.
4. While still keeping the motor pulley from rotating, tighten the middle hole set screw until the motor pulley separates from the bushing.
5. When the motor pulley is loose, slide it off the motor shaft.
6. Be careful not to drop the motor pulley and damage the grooves.

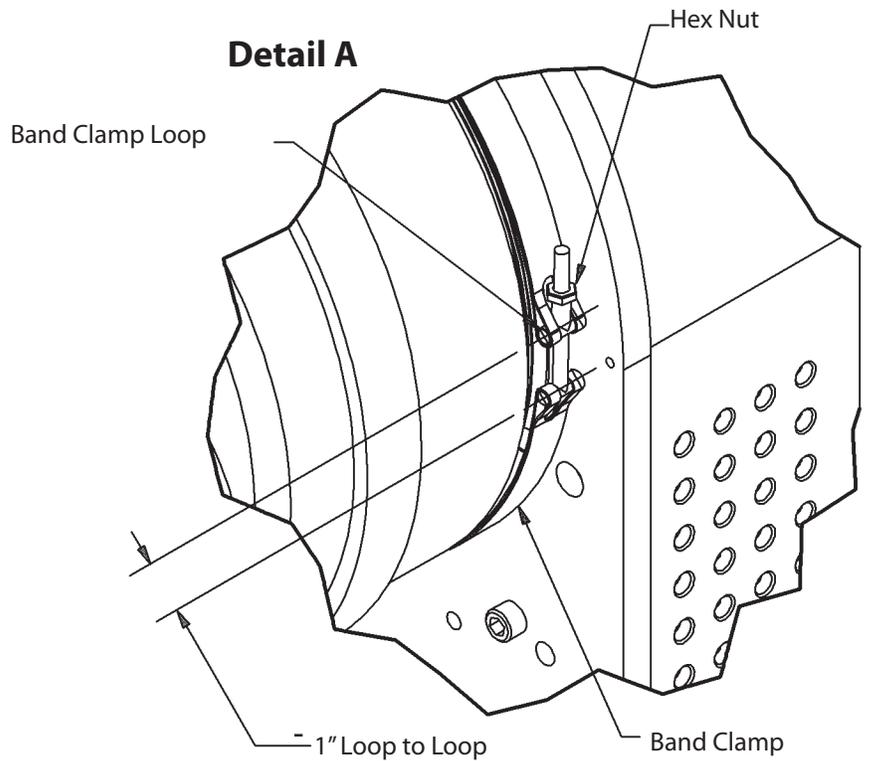
**Note:** This same motor pulley installation procedure applies to the RB2400 Blower.



Blower Housing can rotate CW or CCW as shown in these views.



### Detail A

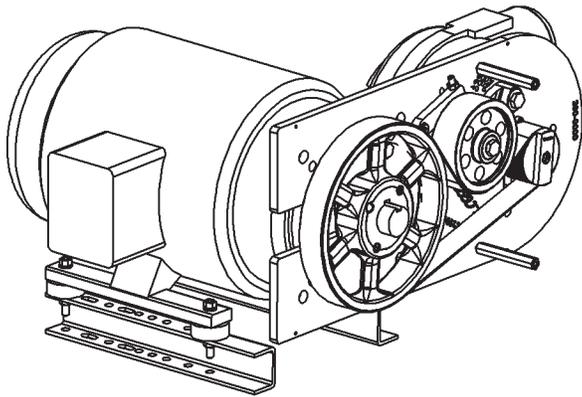


### Blower Housing Rotational Procedures:

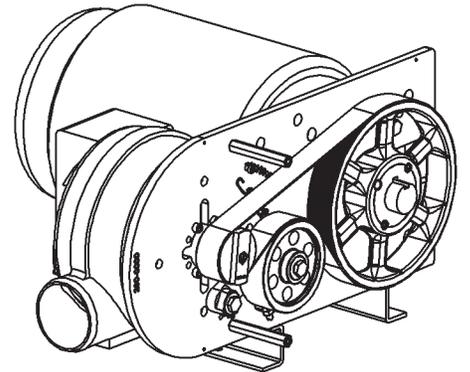
(May be performed by untrained personnel)

1. Loosen hex nut on band clamp using 3/8 inch (9.52 mm) nut driver.
2. Rotate blower housing to desired position, then hand tighten hex nut until band clamp loops are 1 inch (25.4 mm) apart.

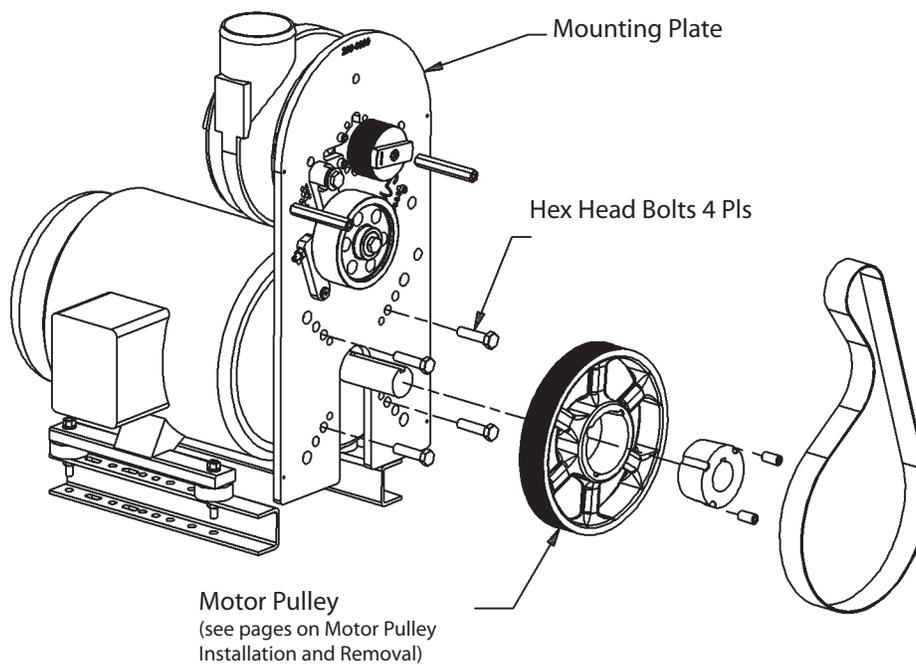
Position 9



Position 16



Position 3



### Mounting Plate Position Procedures:

(May be performed by untrained personnel)

1. Option "A": Remove motor pulley then go to Step No. 1; Option "B": Leave motor pulley on shaft then go to Step No. 2.
2. Remove the four (4) Hex Head Bolts from the mounting plate behind the motor pulley.
3. Rotate mounting plate to desired position and re-install hex head bolts.

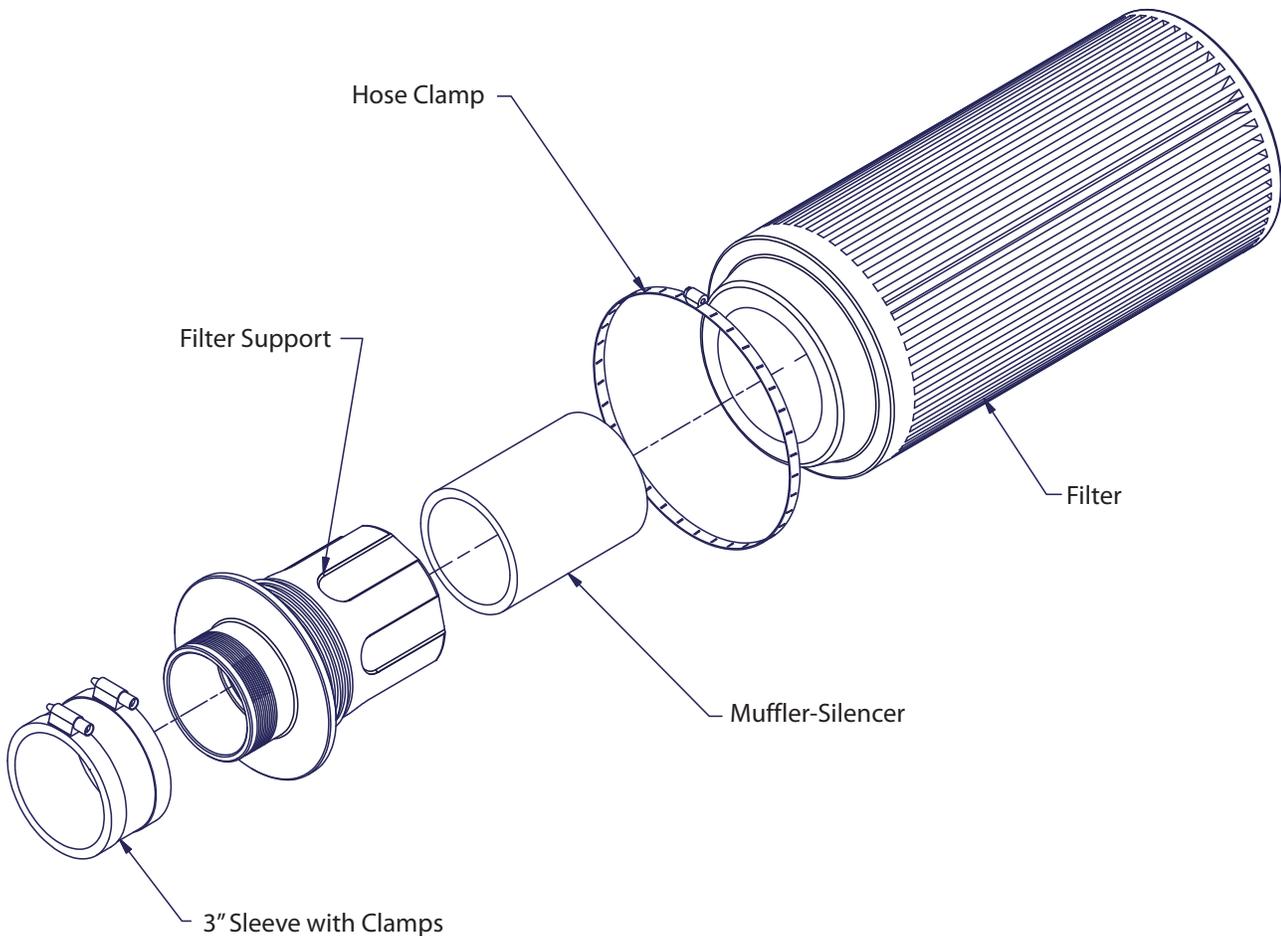


## Air Filter Information

Check air filters and filter gauges on a periodic basis and replace as needed. Filter gauges are located on the air filter canister (as an optional feature) or on the acoustical enclosure doors (standard feature). Dirty or clogged air filters can cause improper performance from the blower system.

Republic Manufacturing recommends that customers keep spare air filters in stock. Spare filters are also available from your local Republic Distributor. Call (800) 847-0380 to order filters.

### RB500 Filter Assembly

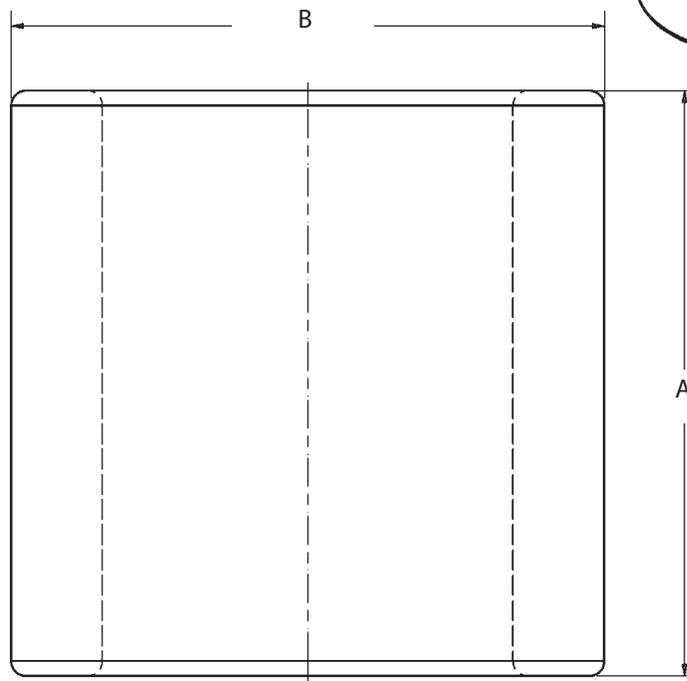
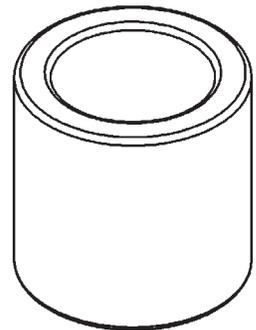


<b>Filter Assembly</b>	250-0920
<b>Paper Filter</b>	C 16400

## RB800/RB1200HC/RB2000/RB2400 Filters

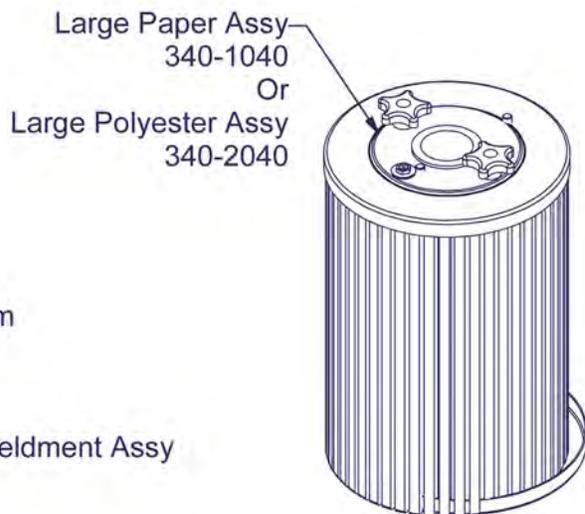
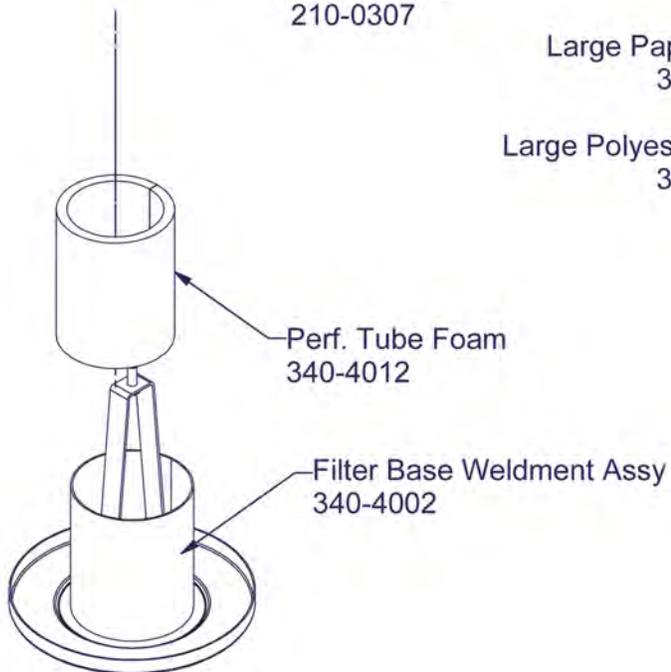
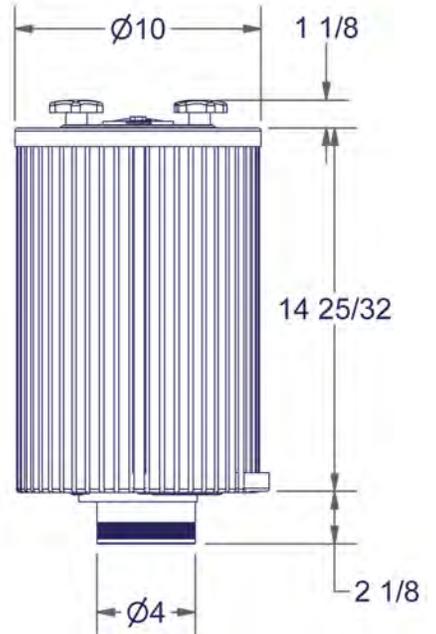
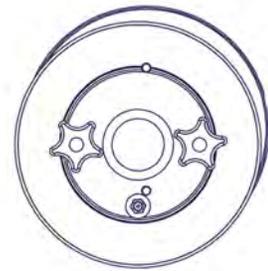
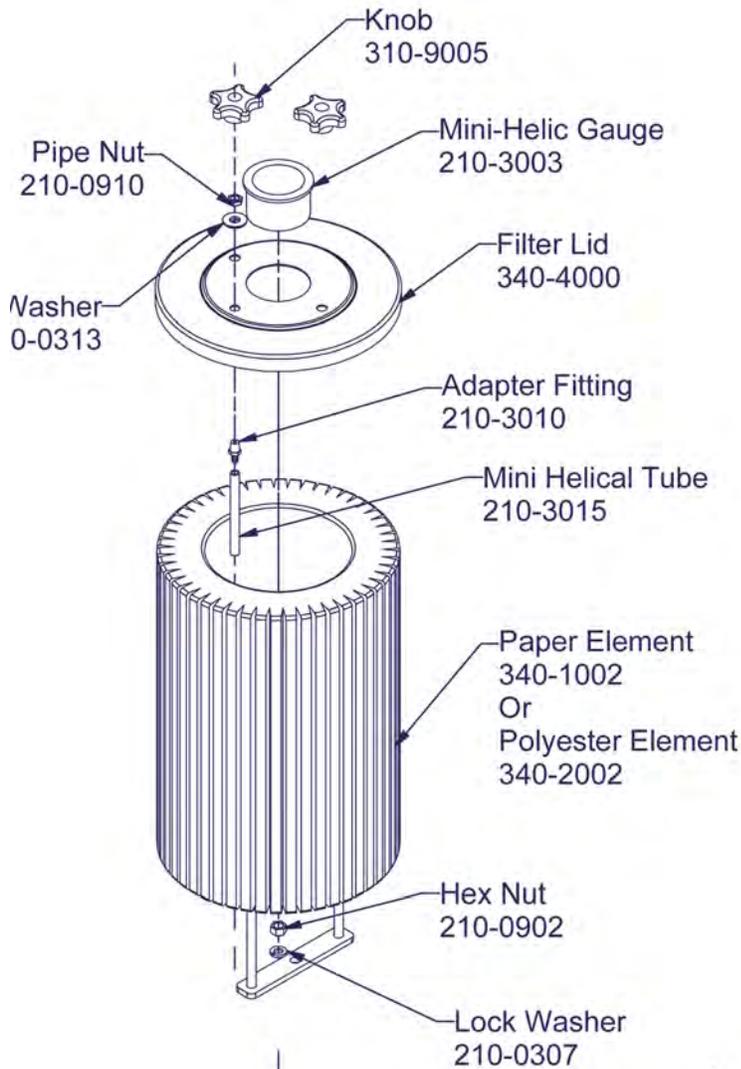
Replacement Filter Reference					
Blower	Description	Part No.	Max. CFM	Temperature	Micron
RB800/RB1200HC	Small Paper	340-1000	880 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99.9% efficiency to 10 Micron
RB1200HC/RB2400	Large Paper	340-1002	1100 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99.9% efficiency to 10 Micron
RB800/RB1200HC	Small Polyester	340-2000	880 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99+% efficiency to 10 Micron
RB1200HC/RB2400	Large Polyester	340-2002	1100 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99+% efficiency to 10 Micron
RB2000	Paper	340-1003	1825 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99+% efficiency to 10 Micron
RB2000	Polyester	340-1004	1825 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99+% efficiency to 10 Micron
RB4000/RB4002	Paper	340-2072	4705 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99+% efficiency to 2 Micron
RB4000/RB4002	Polyester	340-2073	4705 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99+% efficiency to 2 Micron

Paper Part No.	Polyester Part No.	Dimension "A"	Dimension "B"
340-1000	340-2000	9-5/8"	9-3/4"
340-1002	340-2002	14-1/2"	9-3/4"
340-1003	340-1004	14-1/2"	14-5/8"
340-2072	340-2073	14-1/2"	14-5/8"

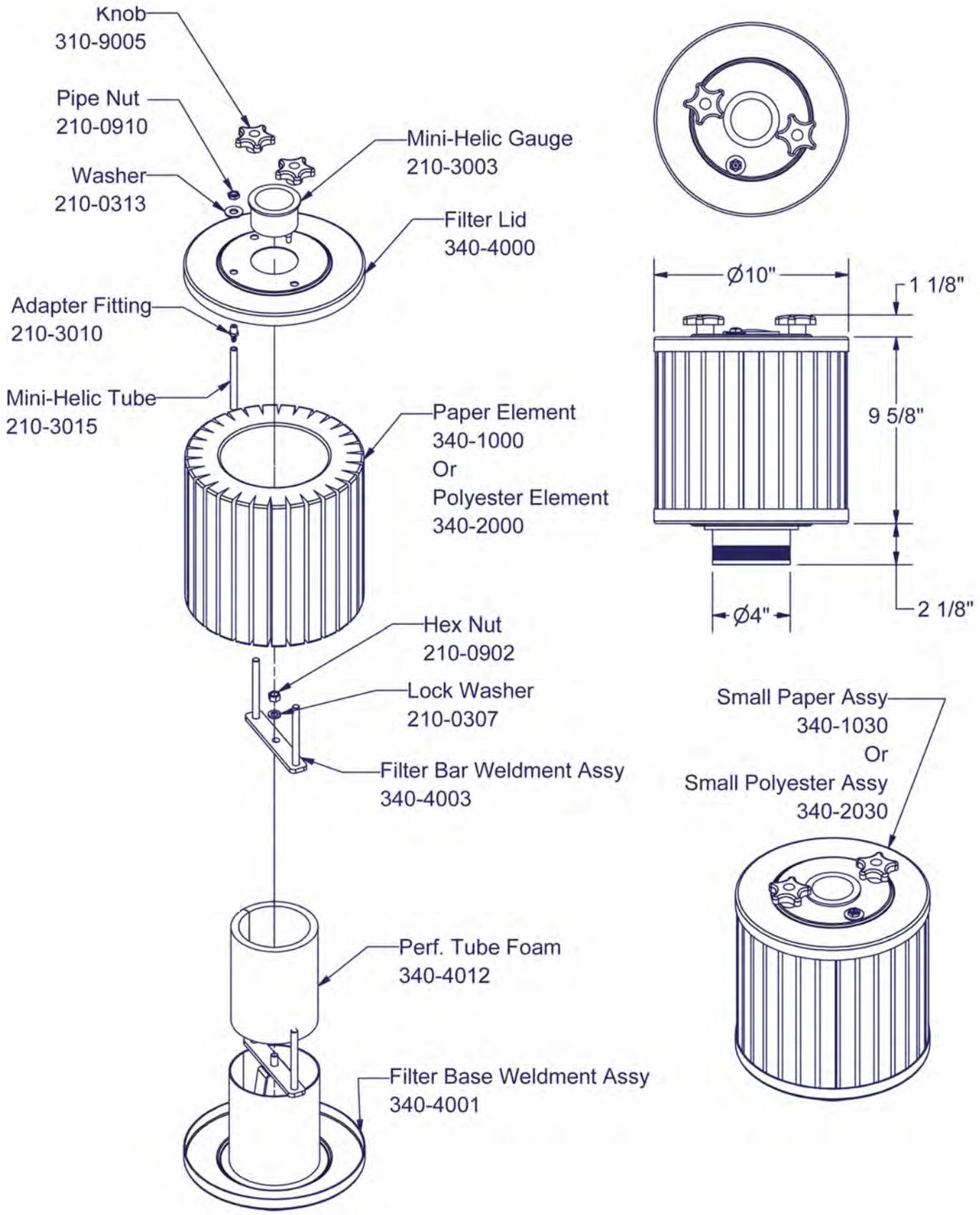




### 340-1040/340-2040: Stainless Steel Large Inlet Filter Assembly

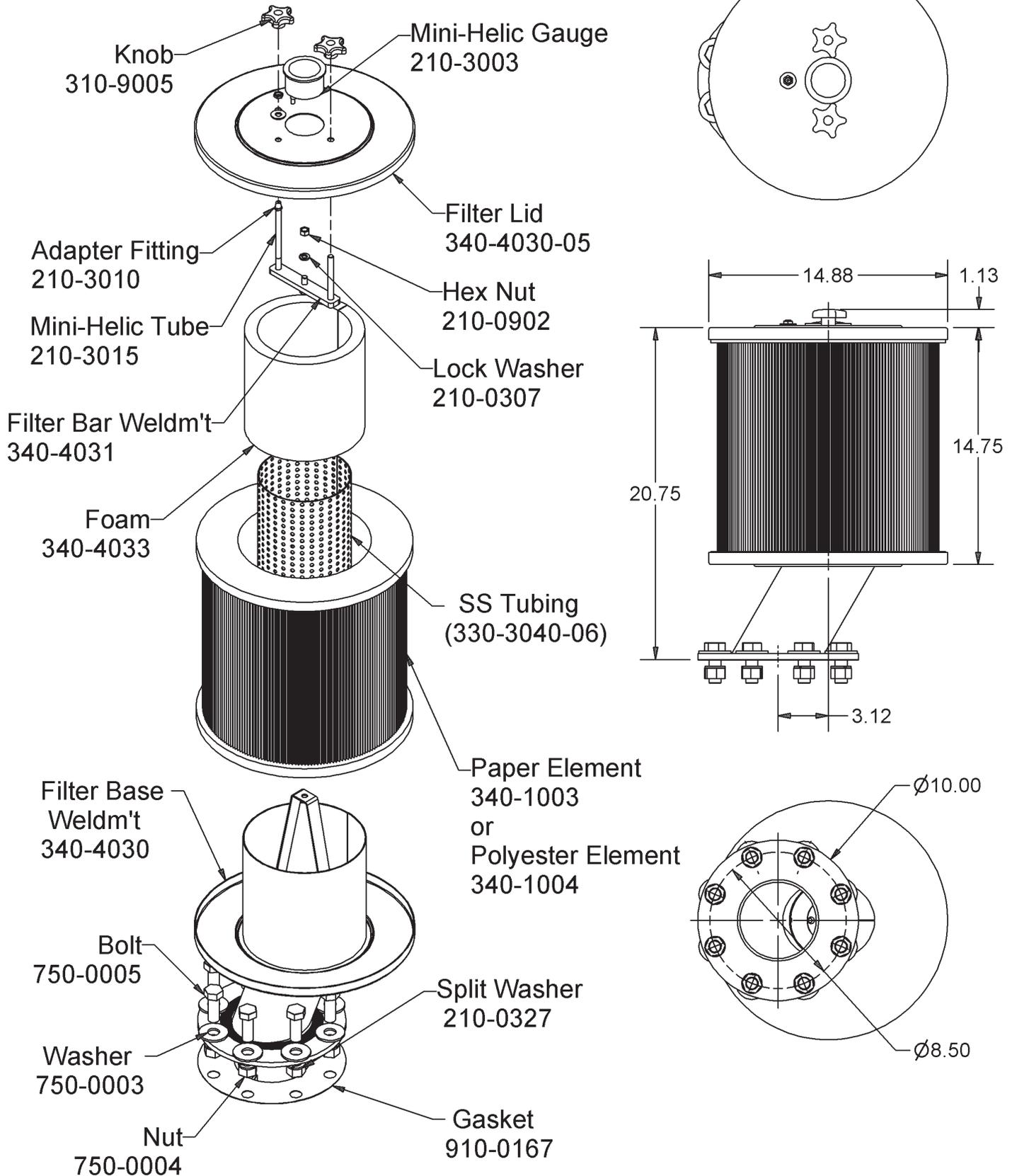


### 340-1030/340-2030: Stainless Steel Small Inlet Filter Assembly

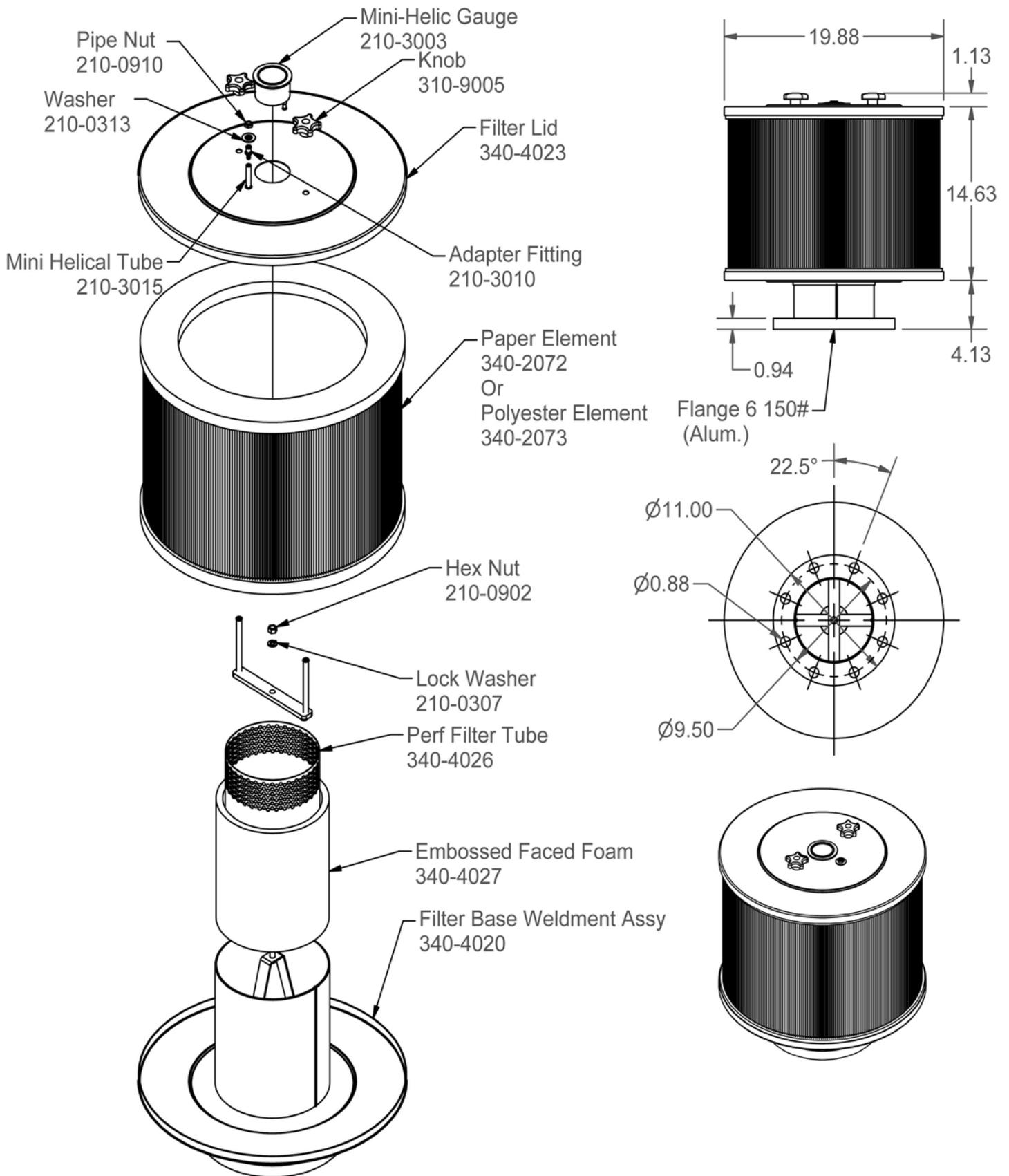




### 340-1035: RB2000 Stainless Steel Inlet Filter Assembly

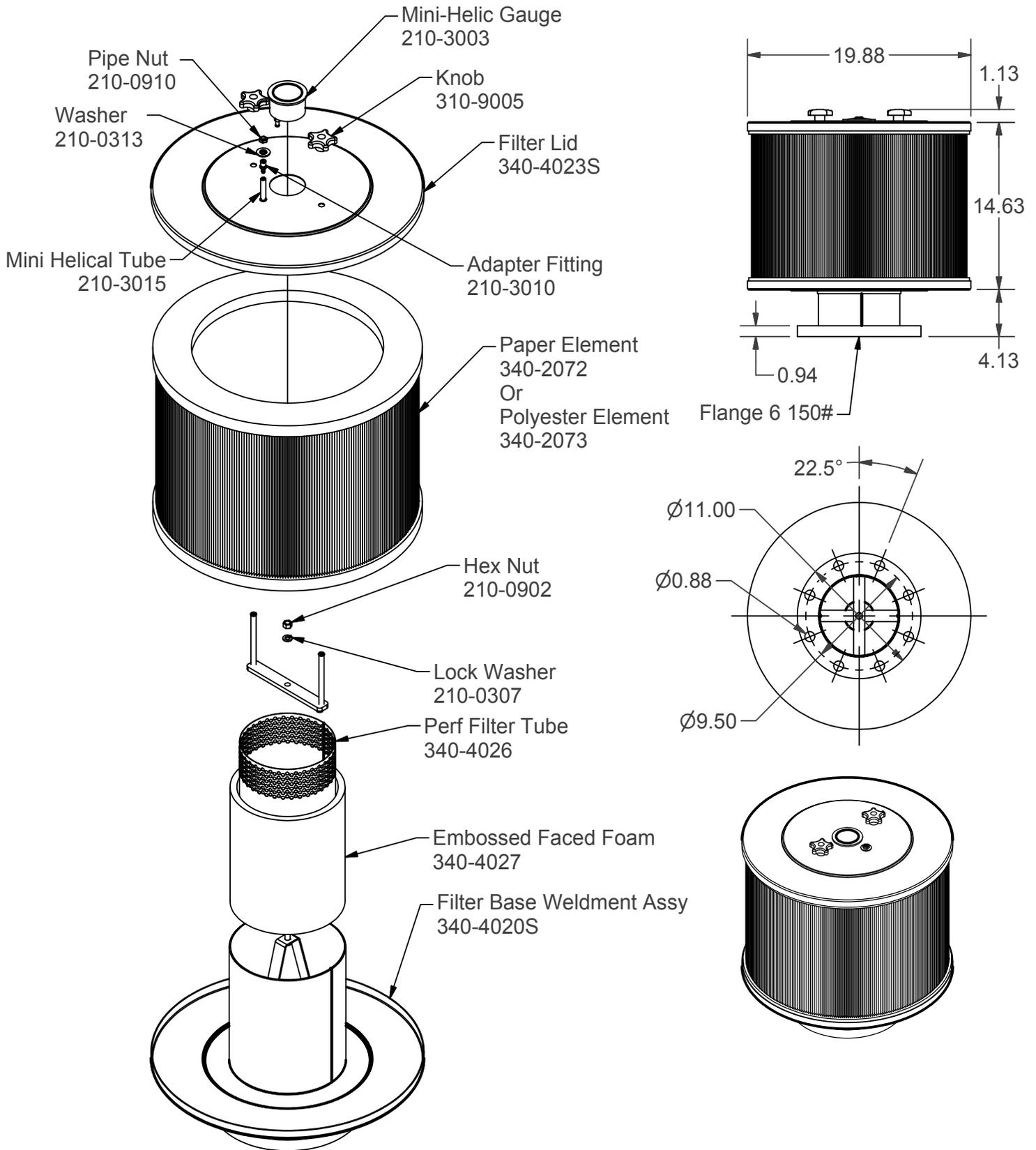


### 340-2070/340-2071: RB4000/RB4002 Inlet Filter Assembly

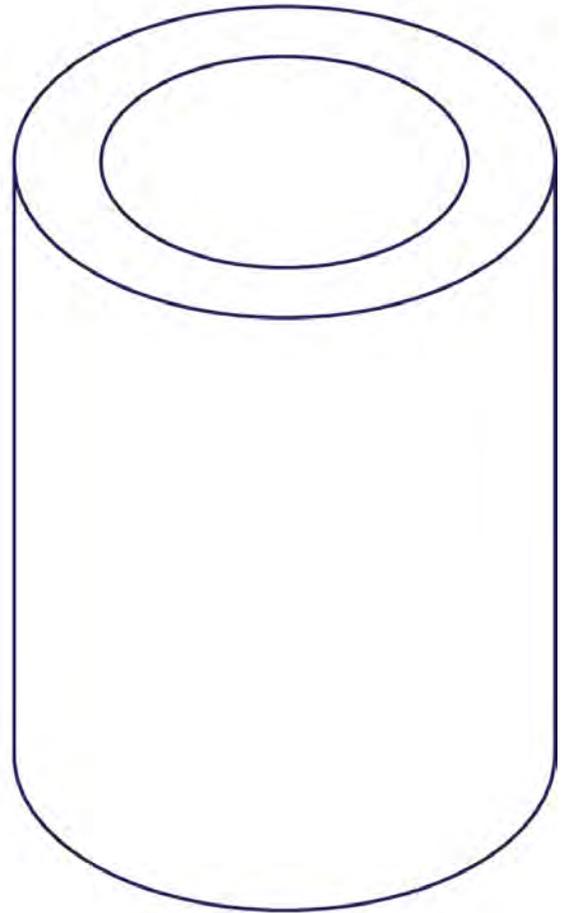
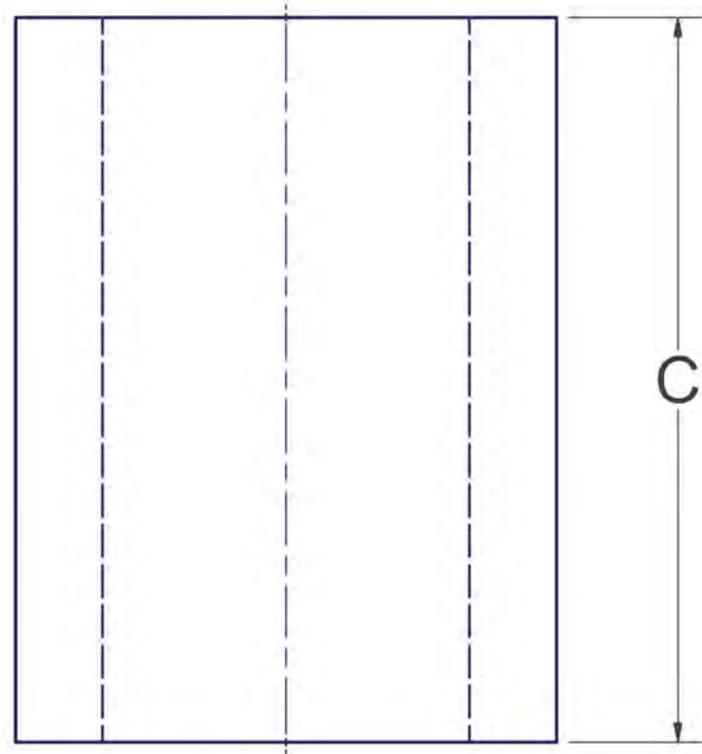
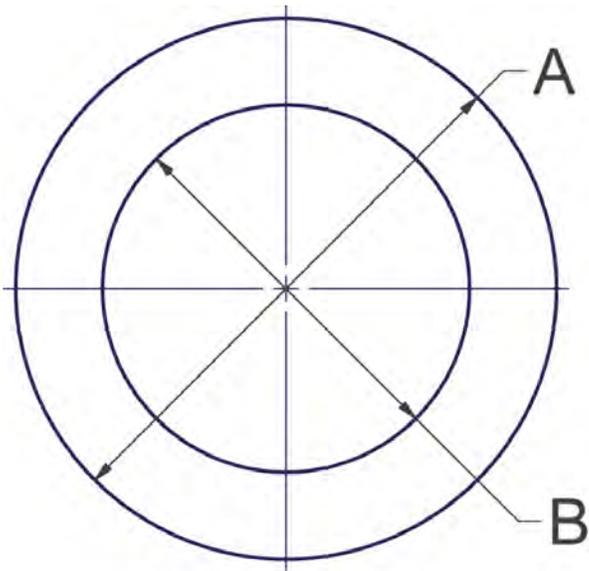




### 340-2070S/340-2071S: RB4000/RB4002 Stainless Steel Inlet Filter Assembly



## HEPA Filter Element

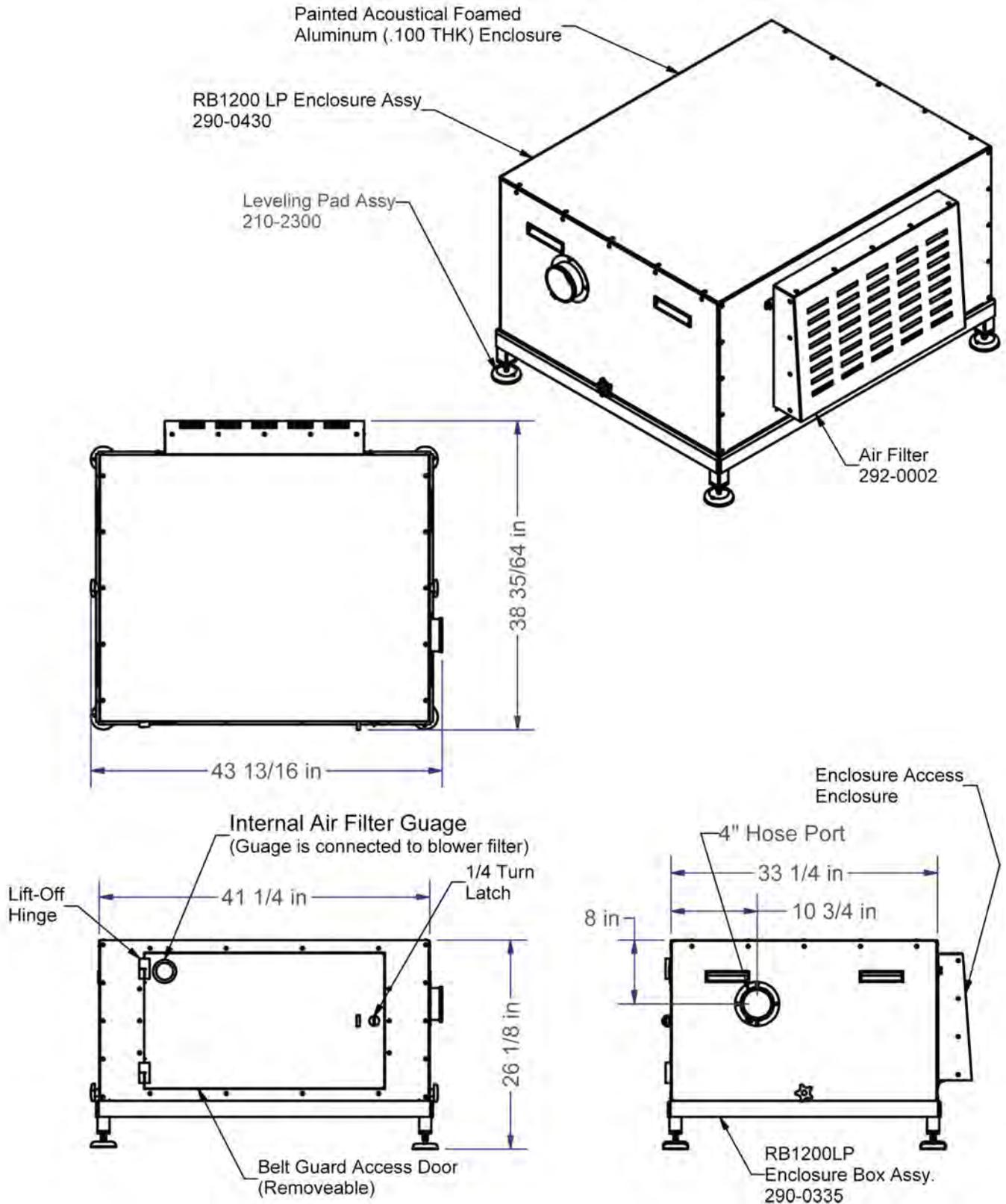


Filter Dimensions (inches)	A	B	C
HEPA Filter Small Element (340-3000)	14	9 1/2	9 1/2
HEPA Filter Large Element (340-3001)	14	9 1/2	18 3/4

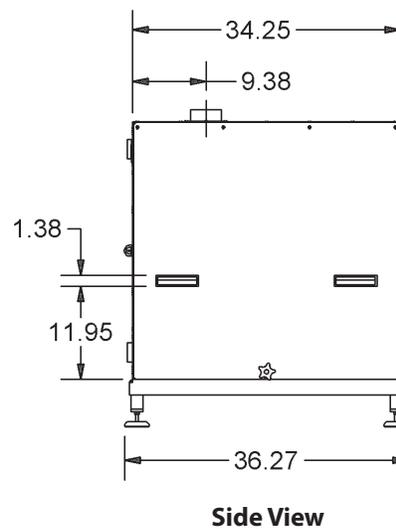
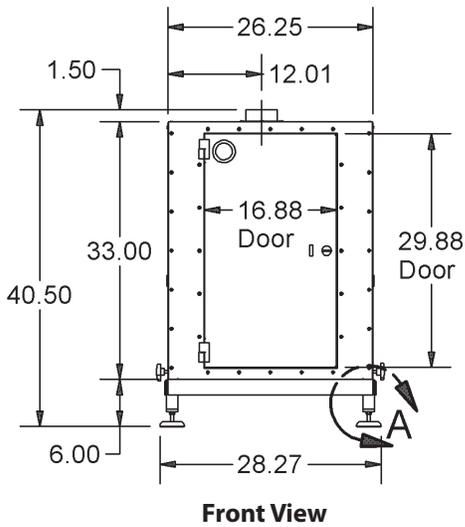
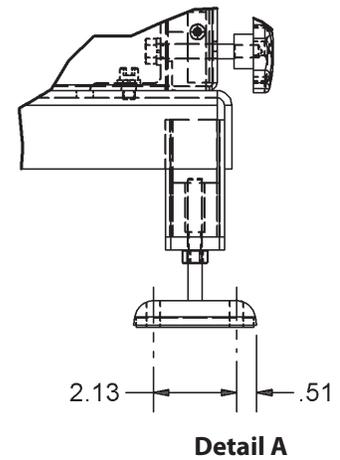
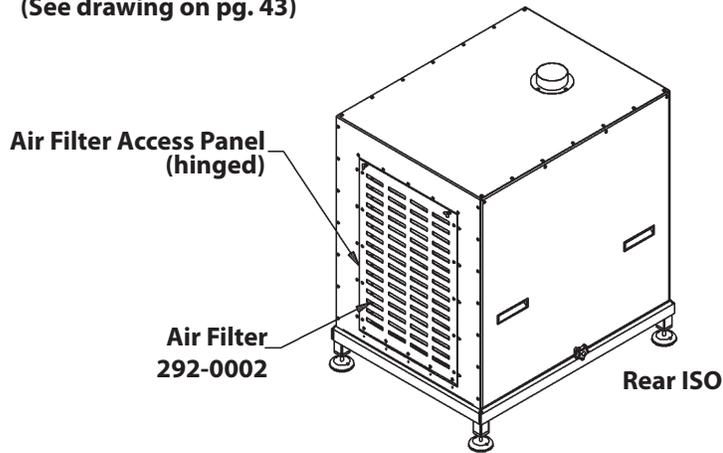
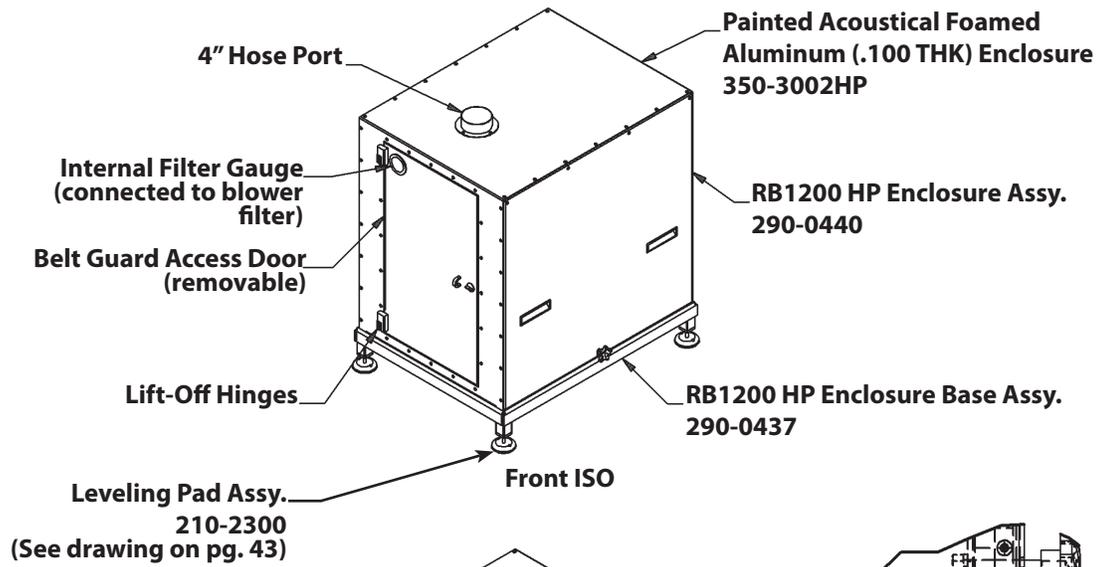


# Enclosures

## RB800/1200HC Low Profile Enclosure

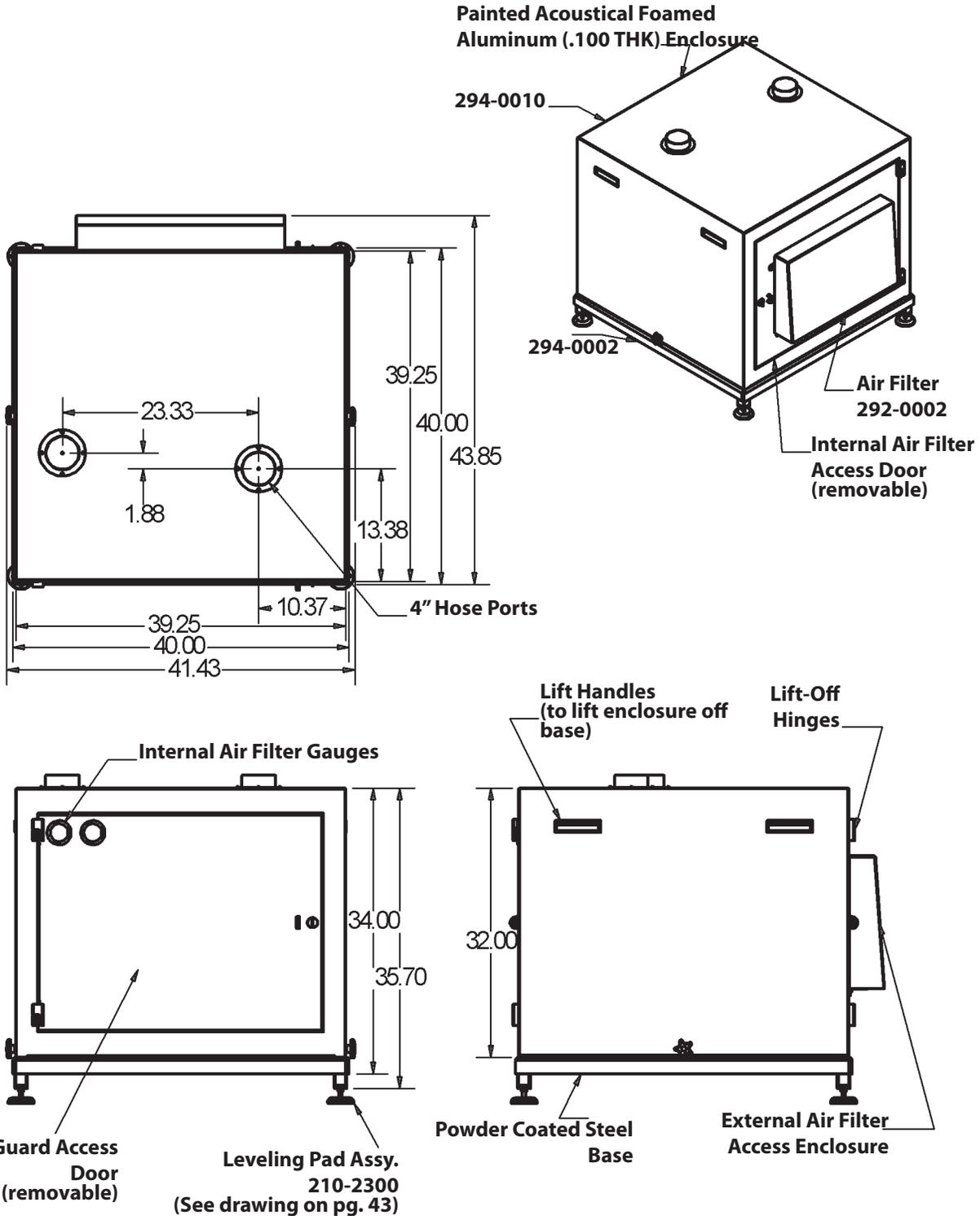


# RB800/1200HC High Profile Enclosure

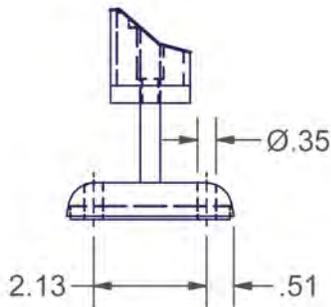
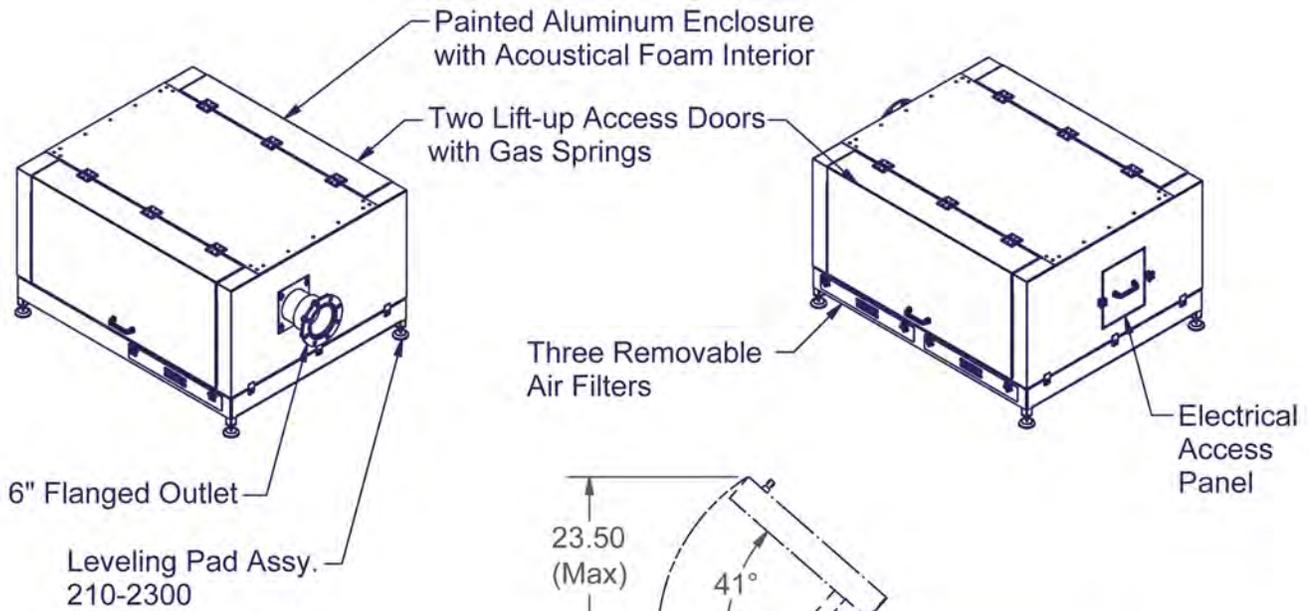




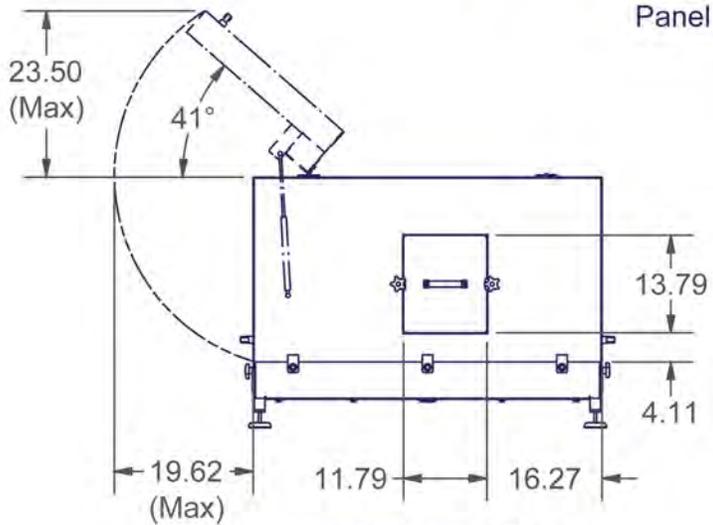
# RB2400 Enclosure



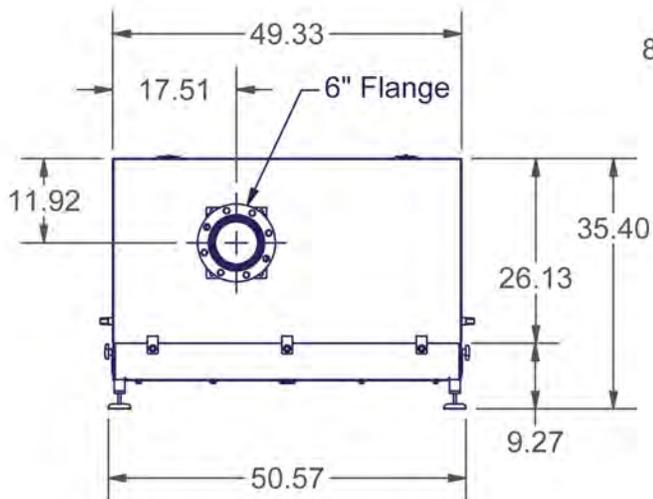
# RB4000 Painted Aluminum Enclosure



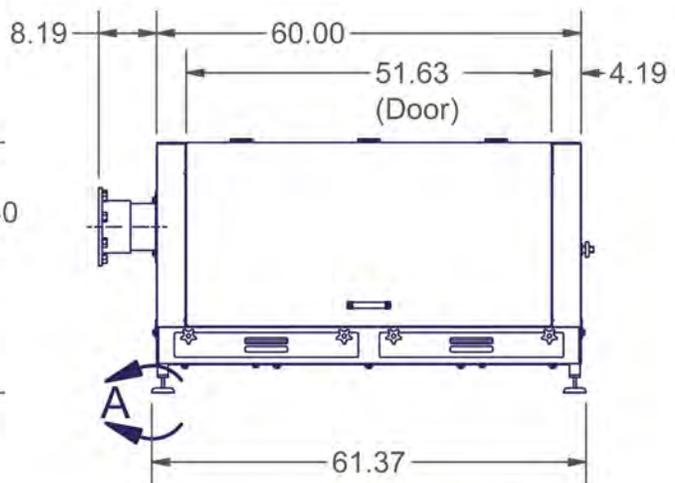
**DETAIL A**



**RIGHT SIDE**



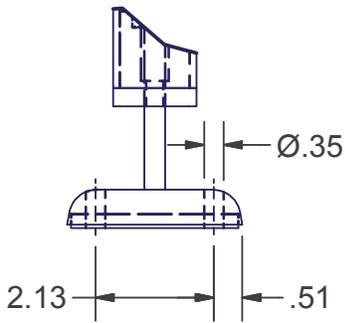
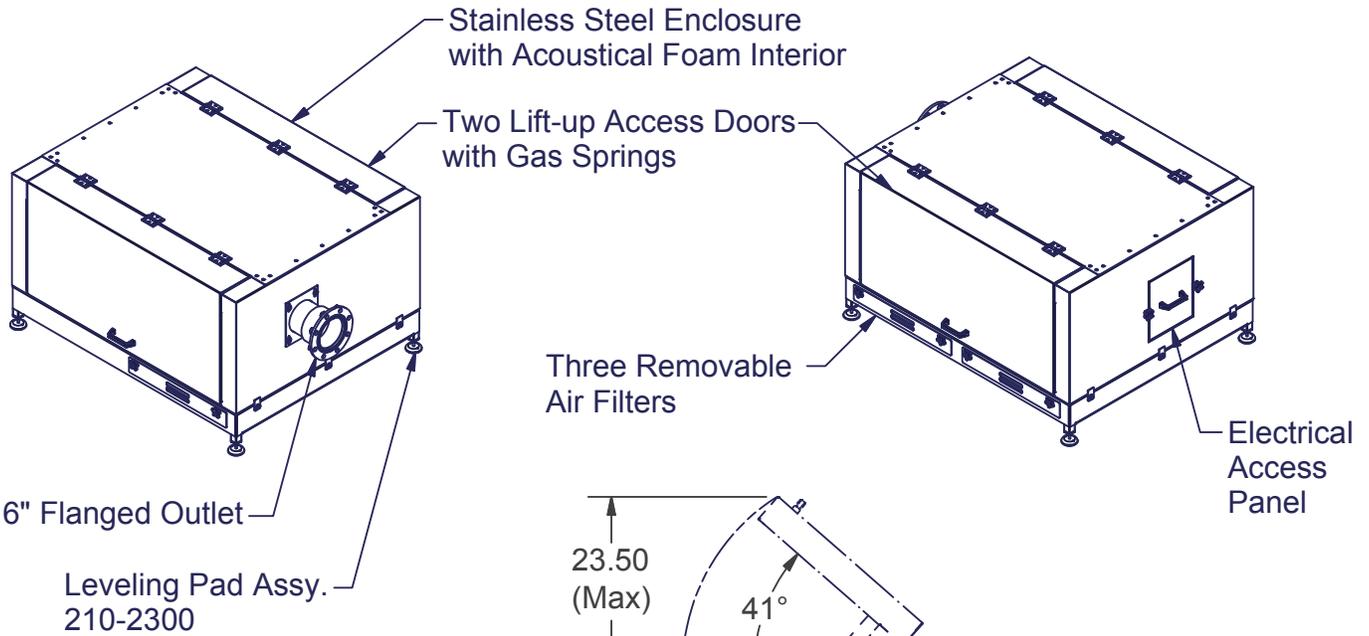
**LEFT SIDE**



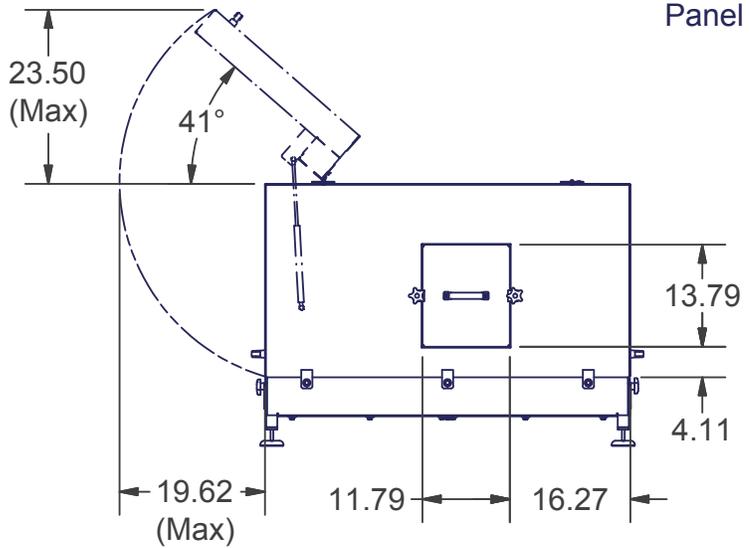
**FRONT**



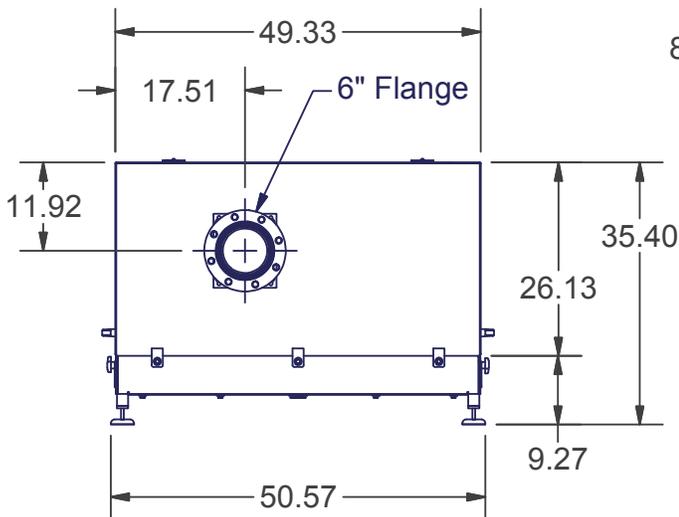
# RB4000 Stainless Steel Enclosure



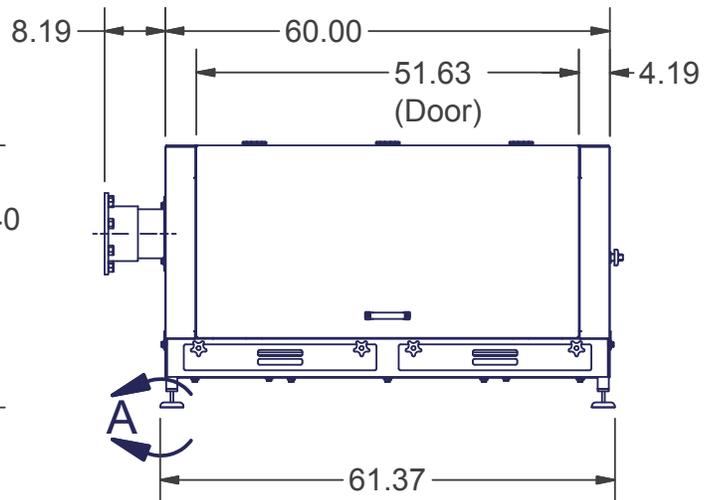
**DETAIL A**



**RIGHT SIDE**

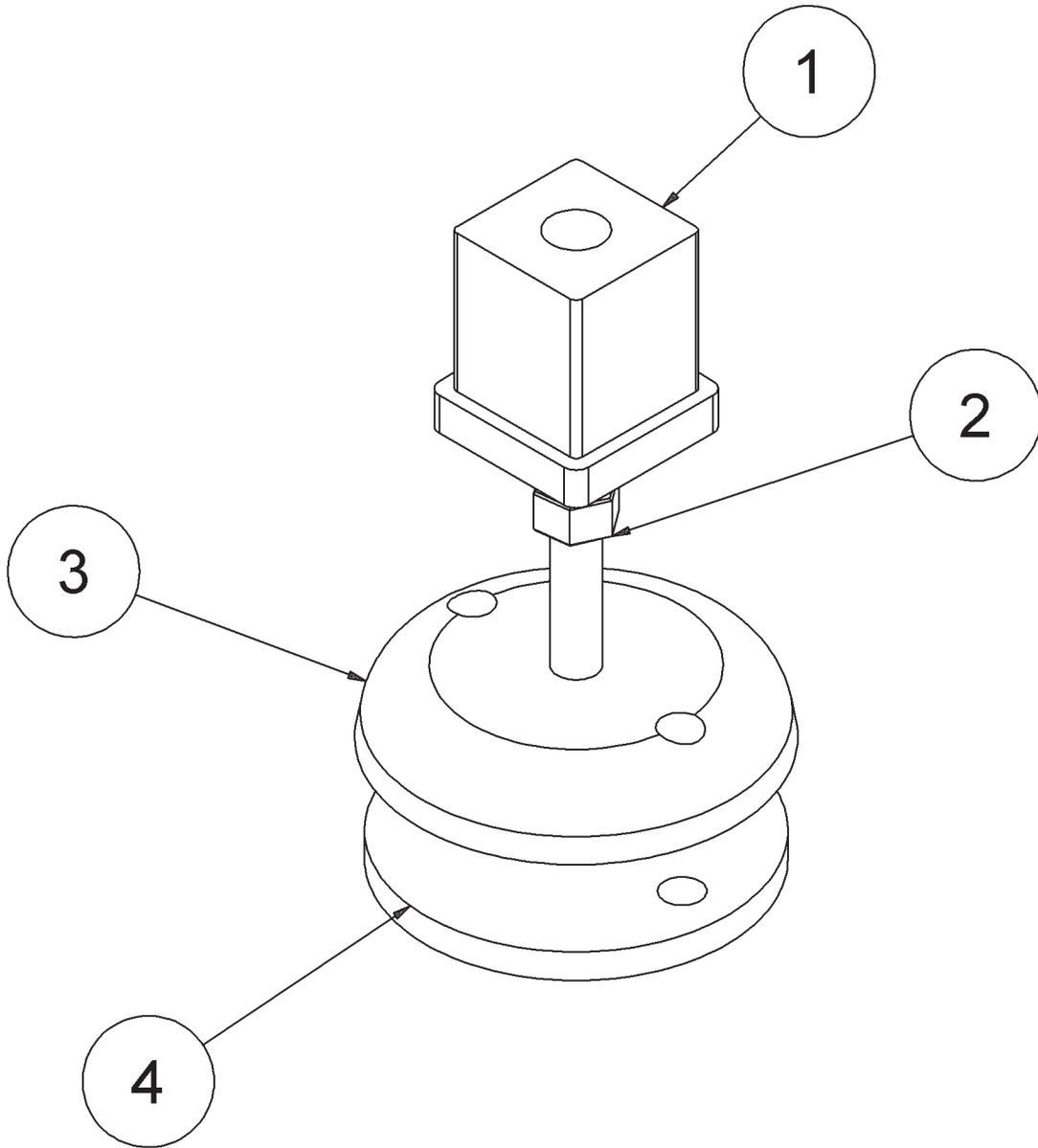


**LEFT SIDE**



**FRONT**

## Leveling Pad Assembly



Item No.	Part No.	Qty.	Description
1	210-2205	1	Tube End, Threaded 3/8-16
2	210-0902	1	3/18-16 SS Hex Nut
3	210-2206	1	Leveler, 3/8-16 (#VG-505-02-P38-L3)
4	210-2207	1	Pad, Leveler



## Recommended Maintenance Schedule for Republic Blowers

### Filter Maintenance

(May be performed by untrained personnel)

Filters should be changed as needed to maintain a differential pressure of less than 10 inches (254 mm) of water pressure differential. The dial on your filter change gauge should be in the green zone. Normal change intervals are between every two (2) weeks and 90 days depending on the contamination levels in your plant. See Filter Data Reference for additional information.

Replacement Filter Reference				
Description	Part No.	Max. CFM	Temperature	Micron
Small Paper	340-1000	880 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99.9% efficiency to 10 Micron
Large Paper	340-1002	1100 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99.9% efficiency to 10 Micron
Small Polyester	340-2000	880 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99+% efficiency to 10 Micron
Large Polyester	340-2002	1100 CFM	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99+% efficiency to 10 Micron

### HEPA Filter Maintenance

(May be performed by untrained personnel)

The HEPA filter element should be changed to maintain less than 10 inches (254 mm) of water pressure differential. The dial on your filter change gauge should be in the green zone. The change interval is once every six (6) months. See Filter Data Reference for additional information.

Replacement Filter Reference				
Description	Part No.	Max. CFM	Temperature	Micron
Small HEPA	340-3000	800 CFM @ 1" W.C.	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99.9% efficiency to 10 Micron
Large HEPA	340-3001	1000 CFM @ 1"W.C.	Min. Temp. -15°F/Max. Temp. 220°F <i>Min. Temp. -26.1 C/Max. Temp. 104.4°C</i>	99.9% efficiency to 10 Micron

### Enclosure Filter Maintenance

(May be performed by untrained personnel)

#### Replacement Part No. 292-0001 (paper)

This filter is designed to remove large contaminants from entering the inside of your enclosure. If this filter gets dirty, your blower could overheat and discharge pressure could be reduced.

Replacement Part No. 292-0002 (metallic)

This filter is designed to remove large contaminants from entering the inside of your enclosure. It is an oil wetted wire mesh filter. Recommended cleaning interval is weekly or as needed in your facility. If this filter gets dirty, your blower could overheat and discharge pressure could be reduced.

#### Cleaning Procedure for Part No. 292-0002

1. Blow off contaminants with compressed air.
2. Clean with solvent in a parts washing tank.
3. Spray with a light coating of WD 40 or similar lightweight oil.

**Proper pulley alignment is very important.**

## Bearing Maintenance

Bearings are a greased for life design. Bearings are assembled in a clean room environment. Do not attempt to grease bearings or your warranty will be void. If bearings fail in the blower housing, Republic recommends changing the entire bearing cartridge with a new cartridge, impeller, and blower pulley. **This assembly should be balanced by Republic Manufacturing.**

Contact the local distributor or Republic Manufacturing (800) 847-0380 if assistance is needed in identifying the pulley size.

## Belt Maintenance

Replacement Belt Part No.—Refer to appropriate blower replacement part reference charts in the Drive Belt section.

Belt life varies greatly depending on plant contamination levels, temperature, number of stop/starts per hour, and number of hours per days the blower is used.

Typical change intervals are every 3-9 months depending on the above conditions.

- ▲ Always change the spring and belt at the same time for the RB800/RB1200HC/RB2000/RB2400.
- ▲ You should stock a spare belt (and spring for applicable models).



## Motor Pulley and Bushing Maintenance (May be performed by untrained personnel)

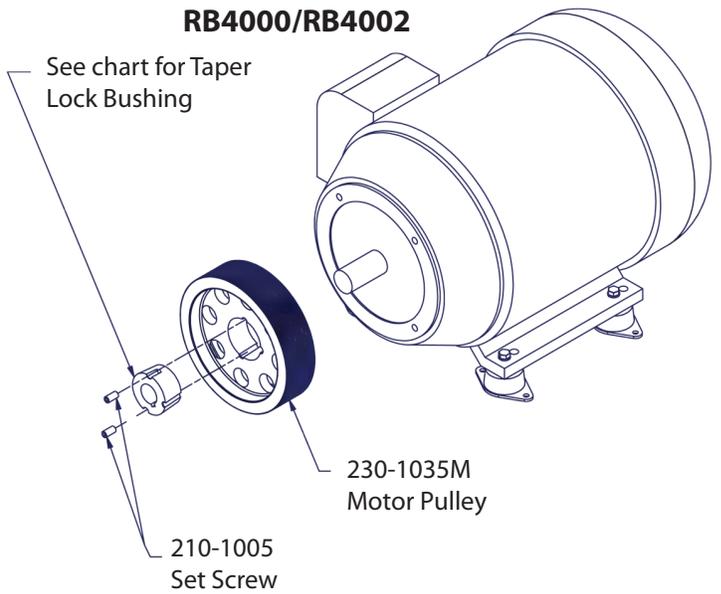
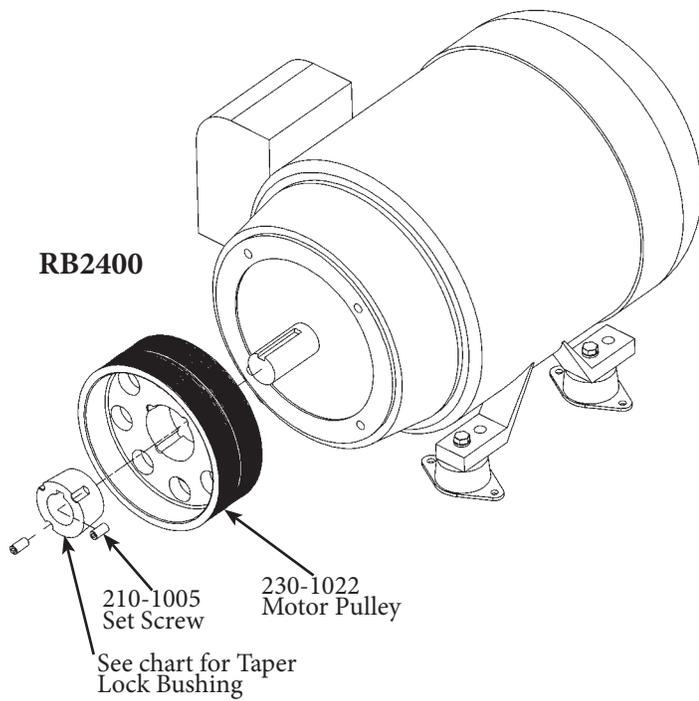
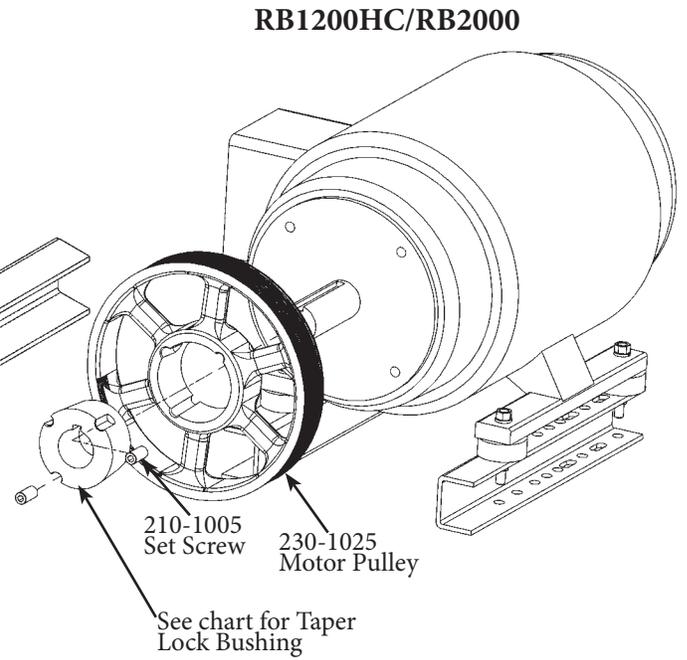
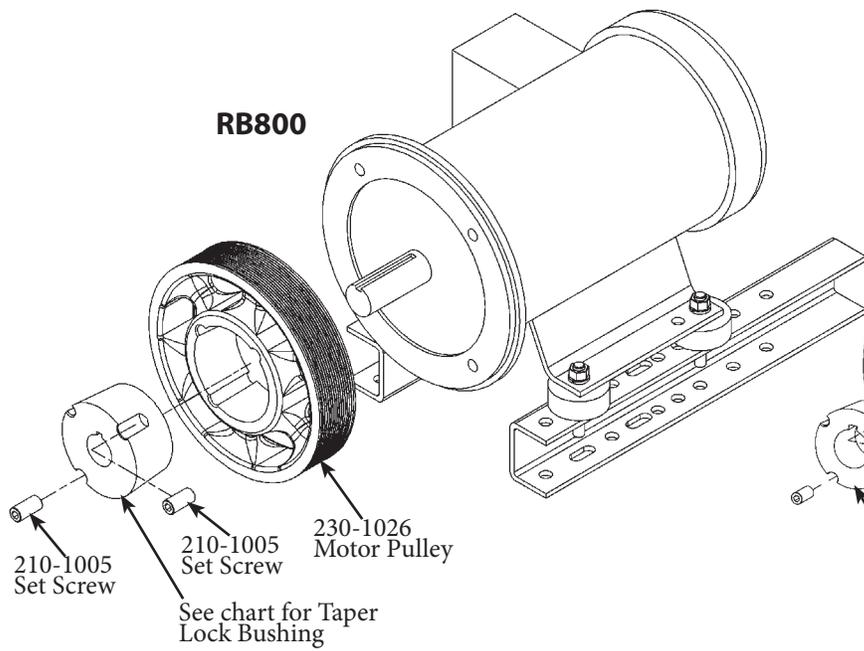
Replacement Motor Pulley Reference	
RB500	230-1026
RB800	230-1026
RB1200HC	230-1025
RB2400	230-1022
RB2000	230-1025
RB4000/RB4002	230-1035M

Replacement Motor Pulley Bushing Reference	
3 HP	230-4001
5 HP	230-4001
7.5 HP	230-4002
10 HP	230-4002
15 HP	230-4002
20 HP	230-4003
25 HP	230-4003
30 HP	230-4003
40 HP	230-4005
50 HP	230-4005

When installing a new motor pulley or servicing your existing unit, verify the outer grooves on both the motor pulley and blower pulley are not damaged, nicked or dinged. Damaged pulley grooves can cause premature belt failures or higher than normal levels of vibration. Be sure to use a torque wrench when installing the motor pulley. Torque the setscrews to 36 ft./lbs. (5m/kg) or 430 in./lbs. (5000mm). Torque the setscrews evenly to ensure proper alignment.

### Max RPM Ratings

Blower	Max. Rotational Speed
RB500	25.8k RPM
RB800	18.7k RPM
RB1200HC	23.8K RPM
RB2000	23.2k RPM
RB2400	19.7k RPM
RB4000/RB4002	16.4k RPM



Motor HP	Bushing Part. No.	Bore
3HP	230-4001	1-1/8"
5HP	230-4001	1-1/8"
7.5HP	230-4002	1-3/8"
10HP	230-4002	1-3/8"
15HP	230-4002	1-3/8"
20HP	230-4003	1-5/8"
25HP	230-4003	1-5/8"
30HP	230-4003	1-5/8"
40HP	230-4005	1-7/8"
50HP	230-4005	1-7/8"



## Troubleshooting Guidelines

<b>Problem</b>	<b>Potential Problem</b>	<b>Suggested Action</b>
<b>Low Flow, Pressure, or Vacuum</b>	Blower is rotating backwards	Check the motor wiring
	Dirty or contaminated filter	Change filter
	Collapsed flex hose or piping	Replace flex hose or piping
	Worn or damaged impeller	Replace bearing housing assembly
	Worn belt (slipping)	Replace belt kit
	Belt tensioning spring worn out	Replace belt kit
	Butterfly valve is closed	Open butterfly valve and check amperage
	Piping design too small for the application	Call Republic Manufacturing or Local Distributor
	Air leakage	Check all connections
<b>Electrical Overloading</b>	Exceeding the designed CFM of the blower motor	Call Republic Manufacturing or Local Distributor
	Blower RPM too high	Call Republic Manufacturing or Local Distributor
	Damaged motor bearing or winding	Call Republic Manufacturing or Local Distributor
	Electrical supply problems	Call Republic Manufacturing or Local Distributor
	Blower not connected to hose or pipe	Call Republic Manufacturing or Local Distributor
<b>Irregular Noise</b>	Blockage in the air lines or piping	Check air lines or piping
	Leakage in the hose or piping	Check all connections and hose or piping
	Frayed or bad belt	Replace belt kit
	Bolts loose on the motor mounts	Tighten bolts
	Blower bearings are worn	Replace bearing housing assembly
	Motor bearings worn or motor fan is rubbing	Call Republic Manufacturing or Local Distributor
	Blower is receiving vibration from other equipment in vicinity	Call Republic Manufacturing or Local Distributor
<b>Belt Slipping</b>	Worn belt	Replace belt kit
	Belt tension spring worn out/missing	Replace belt kit
	Tension pulley assembly worn	Replace tension pulley assembly
	Belt contaminated due to environment	Clean or replace belt kit
	Pulley grooves worn	Replace pulley(s)
	Dirt, dust or debris pulled inside the belt guard area	Clean area
	Incorrect belt size	Call Republic Manufacturing or Local Distributor
	Low belt tension	Check tension setting
	Residue build-up on pulley(s)	Clean pulley(s) with a brass brush
	Dirty contaminated filter	Replace filter
	Bearings seized	Replace bearing housing assembly
	Foreign material preventing bearing housing from rotating freely	Clean bearing housing and impeller

<b>Problem</b>	<b>Potential Problem</b>	<b>Suggested Action</b>
<b>Belt Fraying</b>	Foreign material rubbing on belt	Remove foreign material, change belt kit
	Belt is not seated correctly on pulley(s) and overlapping edges	Align belt correctly, change belt kit
	Worn belt	Replace belt kit
<b>Belt is Jumping or Disintegrating</b>	Motor pulley out of alignment	See motor pulley alignment guidelines
	Worn belt	Replace belt kit
	Belt tension spring worn out/missing	Replace belt kit
	Pulley grooves worn	Replace pulley(s)
	Belt is contaminated	Clean or replace belt
	Low belt tension	Check tension setting
	Residue build-up on pulley(s)	Clean pulley(s) with a brass brush
	Bearings seized	Replace bearing housing assembly
	Foreign material preventing bearing housing from rotating	Clean bearing housing and impeller
	Frequent motor start and stopping	Attach soft start
	Blower is rotating backwards	Check the motor wiring



## In the Event of a Breakdown

1. Use a lockout/tagout procedure to ensure the blower may be worked on safely.
2. Refer to the troubleshooting section of the manual to determine the cause of the breakdown and the appropriate action to take.
3. If further assistance is needed, please call Republic Manufacturing at 800-847-0380.

## When to Ship the Blower Back to Republic

If you cannot fix or troubleshoot your blower system using this manual then a skilled Republic Manufacturing professional is required. Please ship your blower back to Republic Manufacturing.

If the bearing housing or tension pulley has broken down, please ship immediately back to Republic Manufacturing.

## Disabling, Dismantling, and Scrapping of Blower

1. Disable the blower using the lockout/tagout procedure outlined in the manual.
2. Dismantle the blower by removing the motor and other assemblies as outlined in manual. Refer to parts breakdown if needed.
3. Most components are aluminum, stainless steel, or zinc-plated mild steel and may be recycled or disposed of as such.
4. Bearing housing and tension pulley seals are rubber, and belts are rubber or urethane.

## Warranty Terms and Conditions

Republic Manufacturing warrants all finished Republic Manufacturing products to be free from functional defects in material and workmanship for a period of twelve (12) months from the date of installation, or no longer than eighteen (18) months from shipment.

Wear parts such as drive belts, filter elements, hoses and pulleys are not covered by the 12 to 18 month warranty.

DISASSEMBLY OF BLOWER MAY VOID WARRANTY.

To obtain service within the warranty period, first contact your authorized Republic Manufacturing dealer or Republic Manufacturing Service Department. Republic's responsibility under this warranty shall be to provide an analysis of the blower, which will determine course of action. Any product found to be defective within the warranty period will merit either:

- a. A no charge repair of existing blower. Any freight charges will be the purchaser's responsibility.
- b. A replacement blower\*. Any freight charges will be the purchaser's responsibility.

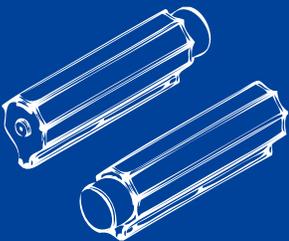
\*This option would be a chargeable replacement until the original blower is received by Republic Manufacturing, and warranty is approved.

Republic Manufacturing shall not be liable for incidental nor consequential damages resulting from the use of this product. There are no expressed nor implied warranties, which extend beyond the warranty of merchantability or fitness for a particular purpose to the equipment and/or its parts and components.





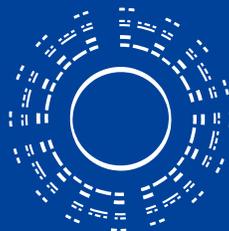
### Air Knife Systems



### Centrifugal Blowers



### Regenerative Blowers



### Vacuum Pumps



5131 Cash Road, Dallas, TX 75247 | 800.847.0380 | [republic-mfg.com](http://republic-mfg.com)

