

# **VERSABASE**

**BLOWER PACKAGE KIT**



## **Assembly Guide**



To our valued customers-

Thank you for purchasing the VersaBase Blower Package Kit. We have every confidence that it will simplify your blower packaging needs. We have used the VersaBase in our business since 1996 and have been refining it every since.

REP Inc. has complete control over the quality of the components used in the fabrication of this product. We made a large capital investment in 2000 in the procurement of a computer controlled Hy-Definition Plasma Machine and 175 Ton Press Brake.

You can be assured of fast, expert service regarding your VersaBase Blower Package Kit.

If you should experience any problems with this product or have questions or suggestions, please do not hesitate to call us toll free at 800-536-9933.

If you are dissatisfied with this product, please return it for a full refund.

Sincerely,

Jim Hene - President

## Assembly Instructions

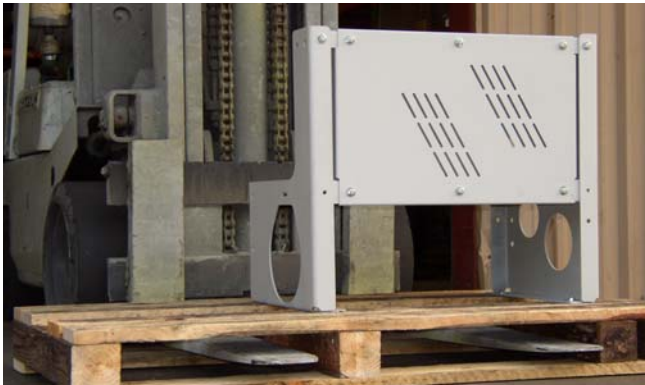
Assembly instructions are provided for the most common VersaBase configuration(s). Since the VersaBase can be configured so many different ways, these instructions give general guidance on methodology. Assembly stands could be utilized to decrease the labor required to assemble the package if production levels dictated the need.

### Recommended Assembly Tools

- Butterfly Ratchet (pneumatic)
- Pipe Wrench(s) - 24" to 48" depending on package sizes
- Pipe Stand
- Strap Wrench
- Tube Bender for 1/4" tube
- Various hand tools including ratchets and open or box end wrenches

### Step 1 - Receiving

Receive the VersaBase on a wooden pallet that can be used again for shipping the assembled package. Depending on how the VersaBase is ordered, the guards are typically assembled on the base.



### Step 2 - Blower Mounting

Remove the guard cover and upper guard. Prepare your blower for mounting by orienting the unit in a horizontal position with the shaft located on the left side. Make sure that the vent is repositioned if it is not located on the top of the gearbox housing. Place the blower on top of the base approximately over the oblong penetration for the blower discharge. There will be four holes that are specifically cut for the unit you are mounting. The blower can be slid around on the base allowing you to locate the mounting holes. Once the holes have been located, slip the mounting bolts into the blower foot. Insert the bolts from the underside of the deck so that your nut, lock washer and washer will be on top. Be sure to place the washer on the bolt before slipping them into the foot. Push the blower toward the lower guard until the mounting bolts will not permit further travel. Square the blower

with the edge of the VersaBase leg. This can be done by measuring the distance between the blower foot and the leg of the VersaBase. Take measurements for both the front and back legs. Place the washer, lock washer and nut on the mounting bolt and hand tighten. Once the sheaves are mounted and the belts are aligned in Step 18, the nuts will be tightened.



### Step 3 - Motor Mounting

Mount the motor slide base on the VersaBase with the supplied fastener kit. Insert the bolts from the underside of the deck so that your nut, lock washer and washer will be on top. Depending on your preference, the motor may be mounted on the slide base prior to mounting on the VersaBase. Start the nuts that mount the motor to the slide base, they need to be loose for Step 18 (sheave alignment) so that the belts may be aligned and the motor may be moved on the slide base. Square the motor slide base with the leg of the VersaBase using the same method as described in Step 2. Hand tighten the bolts that attach the slide base to the VersaBase. These will be tightened later during Step 18.



### Step 4 - Discharge Brackets

Mount the required discharge silencer brackets. Pre-assemble the bracket prior to mounting on the motor side leg. This may be one or two brackets depending on the size of the VersaBase and the silencer size required. The brackets are referred to as inboard and outboard brackets. The inboard bracket is mounted on the underside of the deck and is located between the blower and motor. The outboard bracket is mounted on the motor side leg and is typically oriented to the exterior of the VersaBase,

however, smaller units require the bracket to be mounted under the deck



### Step 5 - Discharge Silencer Sub-Assembly

Sub-assemble the discharge silencer with elbow and TOE nipple (a TOE nipple is threaded on one end and unfinished on the other). A pipe sealant/lubricant is recommended on all threaded connections Rector Seal No. 5® works well in this application as it is a soft-set, slow drying compound which seals, lubricates, and protects threaded pipe and fittings. A teflon rich sealant also works well but tends to be more expensive.



### Step 6 - Discharge TOE Nipple

Screw in the blower discharge TOE nipple and tighten. Don't forget the sealant/lubricant!



### Step 7 - Discharge Flex Coupling

Slide the discharge flexible connector over the TOE nipple mounted in the blower discharge. Before sliding the flexible connector over the TOE nipple, apply some WD-40, or your preferred lubricant, to the interior of the flexible connector. This will make it much easier to slide on the connector.



### Step 8 - Discharge Silencer Mounting

Slide the discharge silencer into position. Place the flexible connector mounting bands on the TOE nipple or discharge elbow very loosely. Insert the TOE nipple mounted on the discharge silencer into the flexible connector. Place the silencer mounting clamp(s) around the silencer and bracket. Tighten the clamps.



### Step 9 - Flex Connector Clamps

Position and tighten the flexible connector clamps. Be sure that one clamp is on the TOE nipple screwed into the blower and the other clamp is positioned on the TOE nipple that screws into the silencer elbow. There should be a small gap between the two TOE nipples (preferably 1/8 to 1/4").

### Step 10 - Inlet Nipple Installation

Screw the nipple into the top (inlet) of the blower. Depending on the configuration, it will either be a TOE nipple or a standard nipple of a length necessary for mounting an inlet filter housing.



**Step 11 - Inlet Silencer Subassembly**

If an inlet silencer is used, assemble the silencer, elbow and TOE nipple.

**Step 12 - Inlet Compression Coupling**



Slide the compression coupling onto blower inlet TOE nipple. Do not tighten the coupling at this point. Orient the clamping nuts so that they face the rear of the blower.

**Step 13 - Mount Inlet Silencer Brackets**

Mount inlet silencer support bracket(s). Typically, only an outboard bracket is required. Some vacuum configurations only require the use of an inboard bracket. The outboard bracket mounts high on the motor side leg. The inboard bracket mounts on top of the deck between the blower and motor.



**Step 14 - Mount Inlet Silencer**

Mount the inlet silencer assembly. Place a torpedo level on the base to obtain a reference level. Mount the inlet silencer assembly and place the torpedo level on top of

the silencer. Adjust the position of the TOE nipple inside the compression coupling until it has the same reference level as the base. Tighten the bolts on the compression coupling. Place the silencer strap around the silencer and bracket and tighten.



**Step 15 - Inlet Filter Mounting**



Mount the inlet filter. Depending on the configuration and the type of filter used, an elbow may be added to orient the filter in a vertical position. Some filters may have a female pipe connection, while others have a male pipe connection. A coupling will be required on a male to male connection.

**Step 16 - Discharge TEE Mounting**

Screw on the discharge TEE for the relief valve and mount the relief valve. A reducing TEE may be required if your relief valve connection is smaller than your pipe size. Reduction can be achieved with either a reducing TEE or reducing bushing arrangement. Depending on the size, a bushing can be more economical.



**Step 17 - Check Valve Installation**

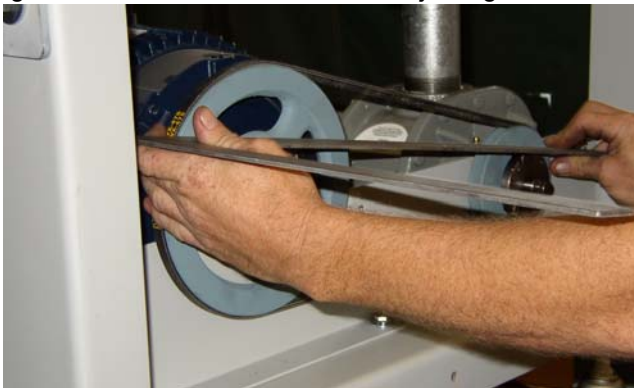
Screw in a check valve if used. This of course assumes that you have a threaded check valve. A wafer type

check valve can also be used between two flanges. Depending on the size, a screw-type flange could be used in conjunction with a nipple.



### Step 18 - V-Drive Mounting

Mount the drive. Be sure to mount the blower sheave back face as close as possible to the lower guard to minimize the overhung load on the blower. The blower sheave can be secured to the shaft and the motor sheave can be adjusted for alignment. Once the sheaves are aligned, tighten the nuts that hold the motor slide base in place. Roll the belts onto the sheaves. A double adjusting screw slide base is preferred. The motor can be moved to gain the proper belt tension. If a double adjusting slide base is used, final alignment can be achieved by either pulling or pushing the motor into position via the adjusting screws. If the sheave is out of alignment, it can be brought into alignment by tightening or loosening the appropriate screw. Once the tension is correct and the sheaves are aligned, tighten the nuts that attach the motor to the slide base. Once the nuts are tightened, release tension on the adjusting screws.



### Step 19 - Lubricate Unit

Lubricate the unit, both gear and drive end. It is easiest to grease the drive end before putting the upper guard into position. Some packagers prefer not to lubricate the blower prior to shipment due to shipping guidelines by certain freight carriers. If you fall into this category, ignore this step.

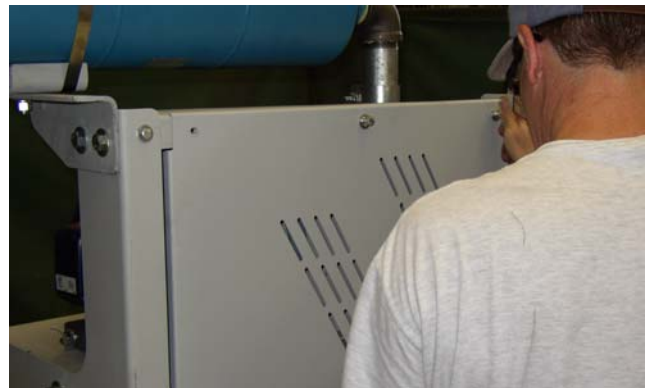
### Step 20 - Mount Upper Guard

Mount the upper guard. Position the upper guard such that the top front holes are aligned with the top front holes on the VersaBase and insert the mounting bolts. A nut, lock washer and washer are required on the back side of the upper guard. The upper guard can be adjusted so that the lower mounting holes on the upper guard are aligned with the mounting holes of the lower guard. Once the three lower holes are positioned, insert the mounting bolts and tighten.



### Step 21 - Mount Guard Cover

Mount the guard cover. Align the guard cover with the mounting holes and insert the fastener hardware. Be sure to use the bolt, lock washer and washer.



### Step 22 - Accessory Mounting

Mount accessory items such as pressure or vacuum gauges, differential pressure gauge (Magnehelic) or any additional bracketing supplied.

The pressure gauge is mounted in a hole on the back side of the base. The hole is designed to accommodate a brass bulkhead fitting. Insert the bulkhead fitting into the base and tighten the lower nut against the bottom of the deck.



A pulsation dampener and gauge cock are recommended as isolation for the pressure gauge. A liquid filled pressure gauge should be used to help dampen the pulsations created by the blower. Place teflon tape around the threads of the pressure gauge, gauge cock and pulsation dampener and tighten the

assembly. Screw the pulsation dampener into the bulkhead fitting and tighten. Female pipe threads are provided on the other end of the bulkhead fitting. Insert a brass compression fitting into this connection, utilize teflon tape to prevent leakage. Run 1/4"



OD copper tube between this fitting and a fitting mounted in the drain of the discharge silencer. Copper tube is recommended due to the temperature of the discharge. If the gauge is for vacuum, polyurethane tubing can be used with quick connect fittings.



If a Magnehelic gauge is used, mount it in the hole provided on the blower side leg. Before mounting the gauge, make sure that the process connections on the side of the gauge are plugged. The gauge will not operate with these connections open. It is recommended that quick connect fittings be used on the back connections. Polyurethane tubing can typically be used on this application since it

is typically at ambient temperature. If the gauge is used for process flows above ambient temperature, copper or stainless tubing should be used. A "pigtail" may be required to cool the air before it gets to the gauge. The gauge is provided with a mounting ring that fits on the

back side. Tighten the screws on the mounting ring until the gauge is firmly in place.

### Step 23 - Painting

The unit is now assembled and ready for either the paint booth or the loading dock (with a few last touches). The unit can be painted at this time if you received it as a primed unit. The primer is a light gray epoxy primer and is compatible with most finish enamels. If you plan to paint the entire unit, make sure that the nameplates are taped and you protect your pressure gauge and copper tubing. For the best results, the entire assembled unit should be primed with your preferred primer and finish coated. You may receive, based on your specification, a VersaBase that has already been primed and finish coated. Make sure to prime and paint in black pipe fittings to prevent rust.



Depending on your preferred paint scheme, it is recommended to remove the guard cover and upper guard and paint separately from the rest of the assembly. These components could be painted OSHA Safety Yellow or OSHA Safety Orange.



Many customers prefer that the unit be painted one color, while others may have the base in one color and the other components left alone and shipped in their original equipment colors.

Once the paint has cured, decals can be applied. At a minimum, safety decals should be used. A "CAUTION DO NOT OPERATE EQUIPMENT WITHOUT GUARDS IN PLACE" decal should be mounted as shown. Direction



arrows are also helpful so that there is no misunderstanding to proper rotation.

Arrows should be mounted on the upper guard in the interior section and on the motor.



The guard cover has a perfect spot for a company decal. This gives you an opportunity to advertise your company name as well as associate your company with a quality finished product. The ideal size for a decal is approximately 9" Long x 3-1/2" in height, located as shown below.



## Step 24 - Shipping

The unit is now ready to ship. Your freight carrier may require a structure around the sides of the unit. Space has been provided to add walls on the pallet.



When the walls are placed on the pallet, lag bolts should be used at each corner to insure that the surrounding structure remains intact when it reaches your customer.



## Step 25 - Blower Manuals

Don't forget to provide the blower manual and accessory cut sheets so your customer has everything they need to maintain their package.

If you should have problems obtaining any of the parts shown in this guide, REP can help. Let us be your resource for:

- Decal Kits
- Flexible Connectors & Compression Couplings
- TOE Nipples & Pipe Fittings
- Motors & Slide Bases
- Sheaves, Bushings & Belts
- Filters & Silencers
- Gauges, snubbers & gauge cocks
- Relief Valves & Check Valves

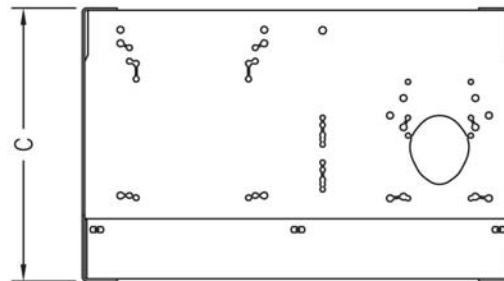


**Table 1: VersaBase General Dimensions(inches)**

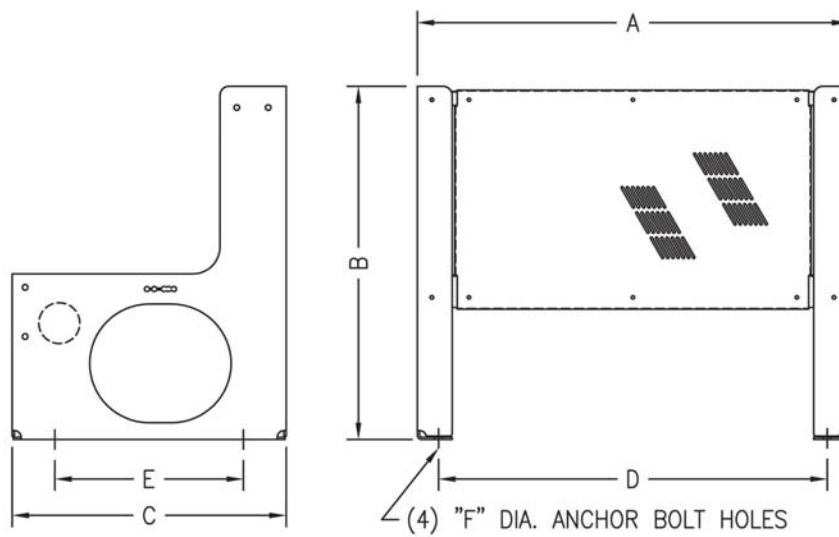
Model	A	B	C	D	E	F	WT (lb)
VB23	30-3/8	26-15/16	20-1/8	26-1/2	15-3/8	5/8	96
VB34	36-3/8	31-7/8	24-3/4	33	18	5/8	160
VB567	51	39-3/8	30-1/2	46-1/4	21	7/8	326

**Table 2: VersaBase General Dimensions(millimeters)**

Model	A	B	C	D	E	F	WT (kg)
VB23	772	684	511	673	391	16	44
VB34	924	810	629	838	457	16	73
VB567	1295	1000	775	1175	533	22	148



PLAN VIEW



SIDE ELEVATION

FRONT ELEVATION



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