

Volume

1

GERBER SCIENTIFIC PRODUCTS

Site Preparation Information

M Series

Site Preparation and Installation

Preparing for the arrival of your new machine.

Prior to the arrival of your machine there are certain things you can have prepared to facilitate a quick and smooth installation. The following information will guide you.

Floor Plan

Refer to Appendix B – Shipping Crates for the dimensions of the machine and necessary clearances.

Preparation

- ☞ Allow sufficient room for operator access and work handling.
- ☞ Vacuum, electrical and pneumatic connections are most conveniently attached at the rear and to the left of the machine.
- ☞ Clean and wax the floor if appropriate. To avoid static electricity, which can interfere with computer operations, carpets are not recommended.
- ☞ Isolation of machine by partitions or windowed walls should be considered, as the machine generates noise that may be distracting to CAD personnel.

External Inputs and Connections

Vacuum Blower

Prior to delivery of your machine, the vacuum blower should be shipped to you. The blower must be installed as close to the machine as is practical.

- ☞ The blower is to be mounted on the supplied rubber shock mounts. Do not lag directly to a floor as this can distort the blower housing. The blower may be mounted vertically or horizontally on a wall, or suspended from a roof. The maximum allowable ambient temperature is 100 degrees F. The blower has a high airflow and produces considerable heat and noise, even with the supplied muffler.

Four-inch PVC piping must be run between the vacuum blower to within 6 feet of the rear of the Sample Table. Try to minimize the use of 90-degree elbows to minimize flow losses. Reduce to a 2" NPT female thread at each end. Gerber supplies 2" NPT barbed fittings and flexible hose to connect the blower and machine to the 4" PVC.

Contact Gerber customer service to be sure the vacuum pump is shipped early.	The 5.5HP motor is nameplate rated at 208-230/460 VAC, 19.5-18.2/9.1 Amps, 60 Hz, 3 Phase. (See Table 1 on page 3). The motor starter is customer-supplied and must be wired in conformance with local electrical codes. The start/stop switch should be mounted near to the front left of the Sample Table.
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Automatic Blower Operation

Note that if you would like to use a magnetic starter as opposed to a manual starter, provision is made inside the Gerber controller to pilot the starter. We provide a normally open set of relay contacts and two terminals for field hookup. The vacuum blower can then be automatically controlled by the cutting system.

Pneumatic

A 90 PSI @ 6 SCFM pneumatic supply is required for the machine. The air quality should be clean, dry, and filtered to 5 microns. A male & female quick disconnect fitting is supplied with the machine. The barb fitting is for $\frac{5}{16}$ " ID hose. The connection on the Sample Table is in the left rear of the base.

Piping runs over 50 feet long should use $\frac{3}{4}$ " or larger piping. A drip leg and coalescing filter should provide sufficient quality. Dryers may be required on pneumatic systems that produce more water than a coalescing filter can accommodate.

If your existing air system lacks sufficient capacity, a compressor will be required. The minimum acceptable size is 3 HP. You will have to provide filtration and possibly a drier to meet the above air quality requirements.

Electrical

Customer must provide service per local code. The machine requires a dedicated 20 AMP circuit at 115V/60 Hz. An equivalent 50 Hz. power source may be used if the factory is notified at the time of order.

☞ Note that on a nominal 115V USA installation, the line voltage must be in the range of 110V to 122V for proper operation of the machine. The service outlet should be within 4 feet of the left rear of the machine. The machine must not be run through an extension cord.

Network

A network cable is desirable for connection between the Sample Table and the CAD computer. If no network exists or if no connection is setup, a floppy disk must be used to transfer sample files from the CAD computer to the Sample Table.

Vacuum Blower

Electrical

Table 1 shows the electrical requirements for the 5.5 HP vacuum blower and the 10 HP vacuum blower.

		5 HP	10 HP
HP/kW	60 Hz	5.5/4.1	10/7.5
	50 Hz	5.0/3.7	8/6
Voltage	60 Hz	208-230/460-3	208-230/460-3
	50 Hz	190-220/380-415-3	190-220/380-440-3
Amps	60 Hz	19.5-18.2/9.1	35-29.5/15
	50 Hz	14.2-13.4/7.1	27-23/13.5-12.3
Starting Amps	60 Hz	83 @ 460V	120 @ 460V
	50 Hz	72 @ 380V	143 @ 380V
Insulation Class		F	F
Recommended NEMA Starter Size		1/0	2/1
Net Weight (lbs/kg)		215/98	293/133

Table 1

SITE PREPARATION AND INSTALLATION

Dimensions

Figures 2 and 3 show the dimensions of the vacuum blower supplied with your Sample Table.

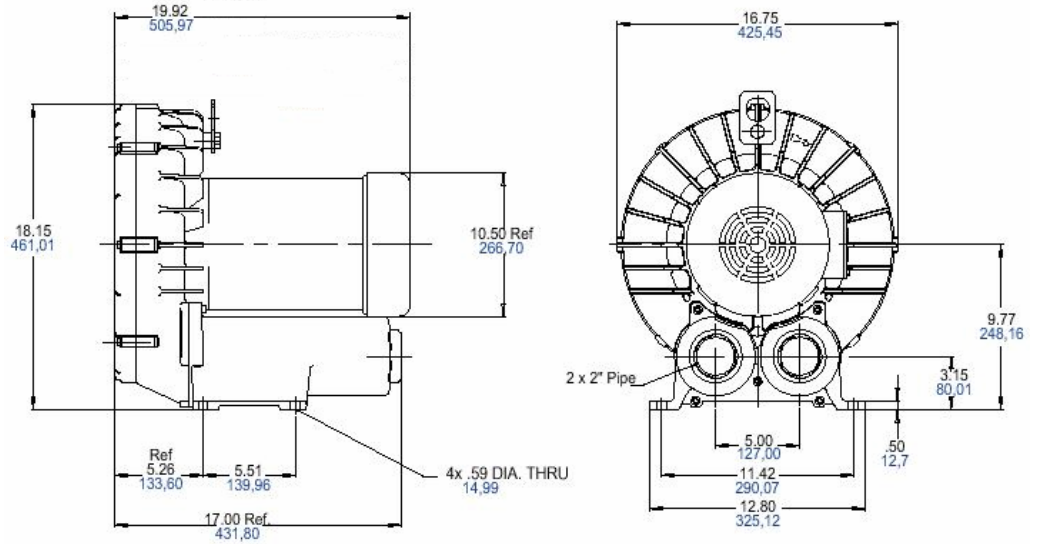


Figure 1 – 5.5 HP Vacuum Blower

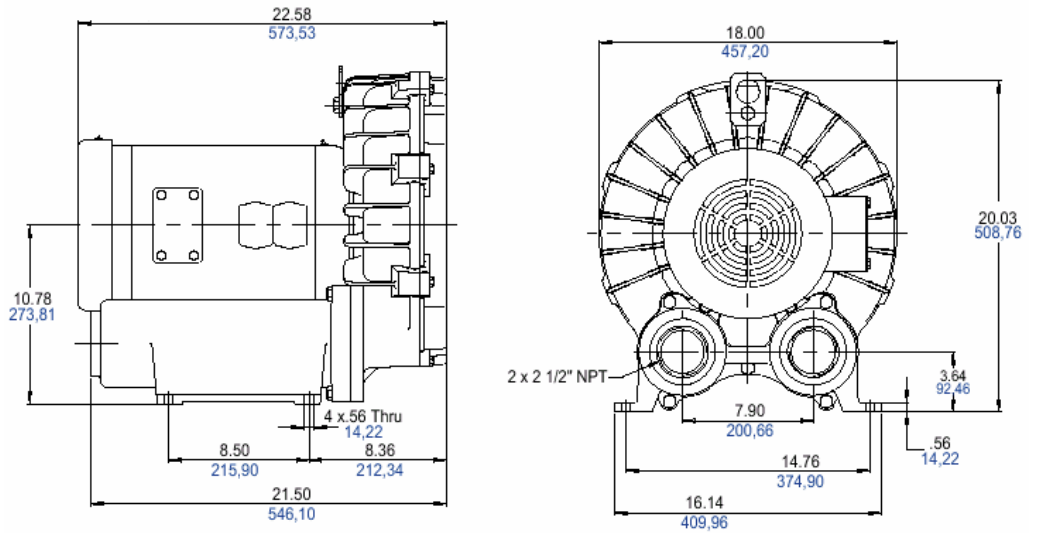


Figure 2 – 10 HP Vacuum Blower

Shipping and Handling

Access

During installation, large machine parts will need to be moved into final position. Any large objects in the work area should be moved out of the way prior to installation.

Arrival

Refer to Appendix B for the dimensions of the shipping crates.

The M1200 is shipped fully assembled. Refer to Appendix B – Shipping Crates to determine if the machine will fit through any doors or elevators to get to the final location. If the machine will not fit then it will need to be disassembled and moved in pieces. The service technician will require help during this process.

With the M3000 and any other M Series table size, four persons can handle the major assemblies, all of which break down into sub-assemblies weighing 250 or less.

☞ Note that the vacuum pump skid is usually shipped early.

Loading Dock

The availability of a loading dock will determine what type of truck is used. Please inform Gerber of this in advance of installation.

Fork Lift

A forklift is desirable but not necessary. A pallet and hand-operated jack and dollies are necessary.

Uncrating

☞ Wait for Gerber service personnel before uncrating.

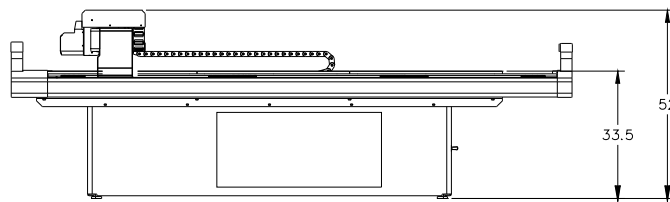
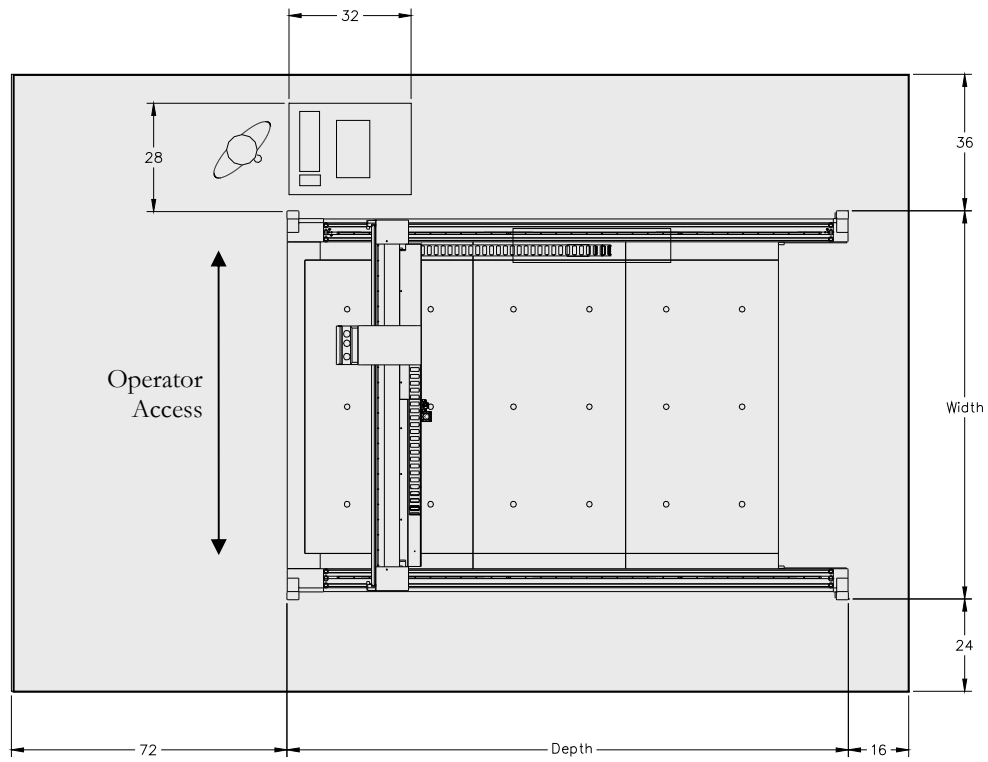
Tools

When installing the machine, Gerber personnel will need access to the following:

- Claw hammer
- Pry bar
- 3/8" reversible/variable speed pistol drill
- Extension cord
- Fantastic or another general purpose cleaner
- Cloth rags
- Spray can of 10-weight oil
- Vacuum cleaner

Appendix A – Floor Plan

	Floor Plan Width x Depth	Recommended Total Clearance
M1200	94" x 76"	154" x 164"
M3000	103" x 151"	163" x 239"



(All units are in inches)

Appendix B – Shipping Crates

Dimensions – Length x Width x Height (Weight)

	Crate – Base*	Crate – Surface	Crate – Cross Beams	Crate – Gantry	Skid – Vacuum Pump
M1200	81" x 98" x 67" (1500 lbs.)	N/A	N/A	N/A	36" x 36" (250 lbs.)
M3000	28" x 103" x 32" (800 lbs.)	51" x 84" x 22" (1070 lbs.)	31" x 152" x 29" (920 lbs.)	35" x 106" x 29" (920 lbs.)	36" x 36" (250 lbs.)