Gerber M Turbo Site Requirements

Preparing for the arrival of your new machine.

Prior to the arrival of your Gerber M Turbo Cutting System there are certain things you can prepare to facilitate a quick and smooth installation. The following information will guide you.

It is also important that you complete the **Site Preparation and Warranty Checklist** (the last page of this document) and return it to Gerber Sales Support so that they can schedule the installation of your cutting system.

- Floor Plan Preparation
- Electrical Inputs and Connections
- Vacuum Blower
- Shipping and Handling
- Site Preparation Checklist

Floor Plan

Refer to Appendix A – Floor Plan 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

Setup requirements

- 110 psi air at 6 CFM, filtered to 5 microns. A 5 HP single stage compressor is adequate.
- Two dedicated 120 VAC, 20 Amp, single phase outlets, one for the front-end computer and one for a chip collection vacuum.
- One 220 VAC, 20 Amp, single phase service for the machine controller. The controller must be wired in accordance with local electrical codes (rigid, semi-rigid or cordage). The controller has a ¾" electrical knockout for this purpose.
- 3 phase 35/15 amp power for blower
- Customer-supplied motor starter for blower (manual or magnetic starter), installed and wired as per local electrical codes.

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 bolt 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 (38° C). The blower has a high airflow and produces considerable heat and noise, even with the supplied muffler.

If the blower is going to be more than ten feet from the back of the M Turbo, four-inch PVC piping must be run from the vacuum blower to within six feet of the rear of the Cutting Table. Try to minimize the use of 90-degree elbows to minimize flow losses. Reduce to a 2 ½" NPT female thread at each end. Gerber supplies 2 ½" NPT barbed fittings and flexible hose to connect the blower and machine to the 4" PVC.

Contact customer service to be sure the vacuum pump is shipped early.

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 Cutting Table.

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 110 PSI @ 6 CFM 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 $^{5}/_{16}$" ID hose. The connection on the Cutting Table is in the left rear of the base.

Piping that runs over 50 feet long should use ¾" 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. A single stage 5 HP compressor with a 60 gallon tank is adequate. You will have to provide filtration and possibly a drier to meet the above air quality requirements.

Electrical

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

10 HP Vacuum Blower		Electrical Requirements
HP/kW	60 Hz	10/7.5
	50 Hz	8/6
Voltage	60 Hz	208-230/460-3
	50 Hz	190-220/380-440-3
Amps	60 Hz	35-29.5/15
	50 Hz	27-23/13.5-12.3
Starting Amps	60 Hz	120 @ 460V
	50 Hz	143 @ 380V
Insulation Class		F
Recommended NEMA Starter Size		2/1
Net Weight (lbs/kg)		293/133

Table 1

Electrical

Customer must provide service per local code. The machine requires a dedicated 20 AMP circuit at 220V/60 Hz single phase. An equivalent 50 Hz. power source may be used if the factory is notified at the time of order.

- ☞ Note that on a nominal 220V USA installation, the line voltage must be in the range of 215V to 227V for proper operation of the machine. The service outlet should be within 6 feet of the left rear of the machine

- ☞ Network - A network cable is desirable for connection between the Cutting Table and the CAD computer. If no network exists or if no connection is setup, a disk must be used to transfer substrate files from the CAD computer to the Cutting Table.

Vacuum Blower

Dimensions

Figures 2 shows the dimensions of the vacuum blower supplied with your Cutting Table.

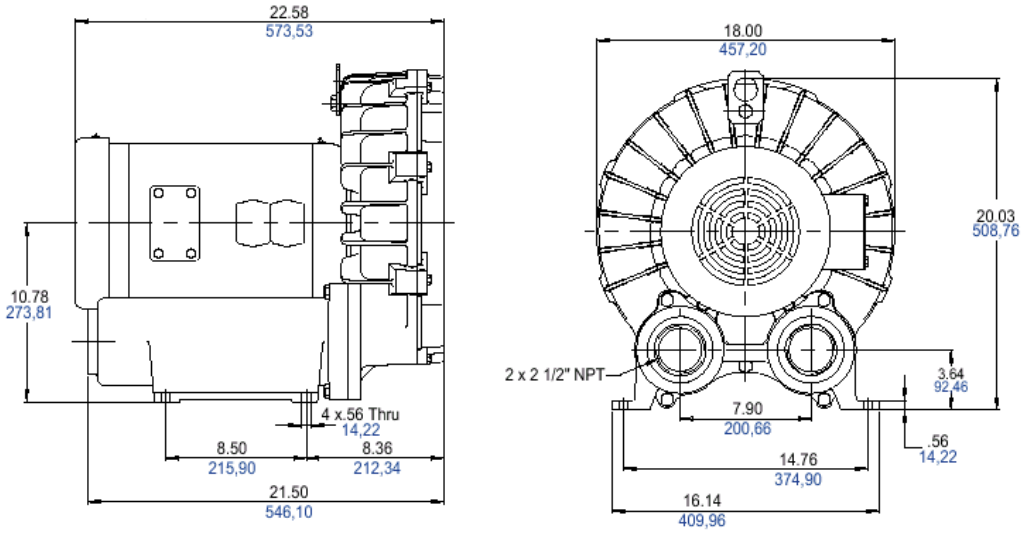


Figure 1 – 10 HP Vacuum Blower

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 – Shipping Crate for the dimensions of the shipping crates.

The M Turbo is shipped fully assembled. Refer to Appendix A – Floor Plan 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.

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

Labor requirements:

Two people, each capable of lifting 50 lbs. (23 kg) must be available to assist the technician on the first day of installation. It is the customer's responsibility to ensure that these people are on hand. If on-site staff is not available, contact local temporary agencies or moving companies to hire them.

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.

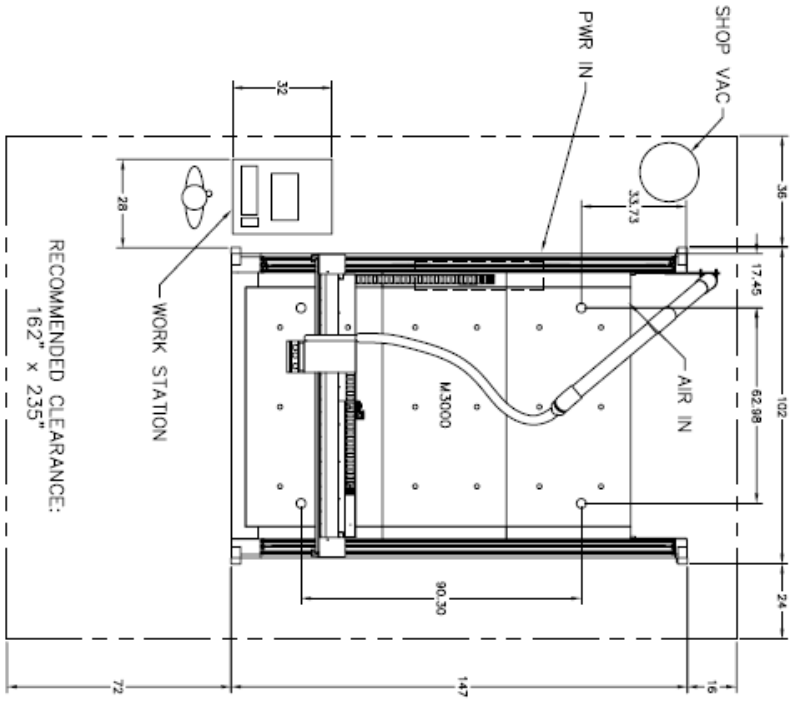
Tools

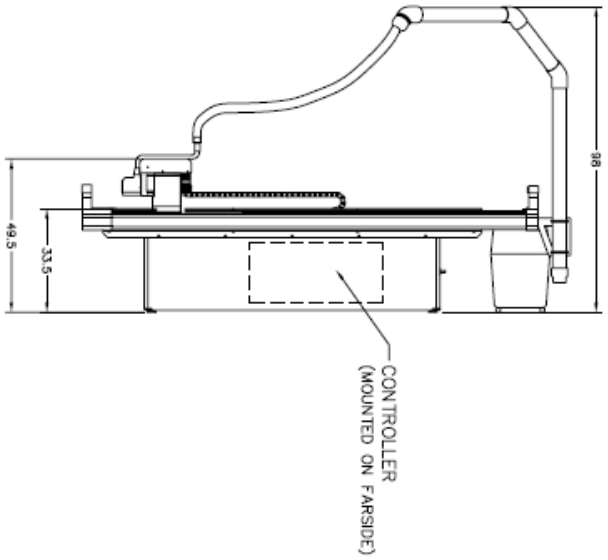
When installing the machine, Gerber Service personnel will need access to the following:

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

Appendix A – Floor Plan

	Floor Plan Width x Depth	Recommended Total Clearance
M Turbo	103" x 151"	163" x 239"





(All units are in inches)

Appendix B – Shipping Crate

Dimensions – Length x Width x Height (Weight)

	Crate – Base*	**Crate – Surface**	**Crate – Cross Beams**	**Crate – Gantry**	**Skid – Vacuum Pump**
MTurbo	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.)

Site Preparation and Warranty Checklist

In order to expedite the Gerber M Turbo installation, complete this checklist and fax it Gerber Sales Support at 800-227-6228.

Description	Complete
Power requirements for the Gerber M Turbo:	
Two 120 Volt, 20 amp power outlets.	☐
One dedicated 220 Volt, 20 amp service.	
One 230/460 Volt, 3 phase, 30/15 amp, 60 Hz power for blower (See page 2 for details).	☐
Customer supplied motor starter for blower (manual or magnetic) must be installed by licensed electrician.	☐
A licensed electrician will install the proper electrical service prior to the arrival of the cutting table.	☐
Compressed air requirements	
110 psi air at 6 CFM, filtered to 5 microns. 5 hp, 60 gallon tank or better.	☐
Weight and clearance requirements for M Turbo Cutting Table:	
Do not have a loading dock but have a forklift to take the Gerber M Turbo crates (maximum weight ~1,070 lbs. [486kg]) off the carrier's truck.	☐
Have a loading dock and a forklift or pallet jack to take the Gerber M Turbo crates (~1,070 lbs. [486kg]) off the carrier's truck.	☐
Do not have a dock or a forklift or pallet jack and will hire riggers to facilitate the delivery and installation of the Gerber M Turbo cutting table.	☐
The outside doorway into the facility is at least 53" (135cm) wide.	☐
Interior corridors and doorways are at least 53" (135cm) wide. (Wider widths are needed for turning radius)	☐
General delivery requirements:	
The path from the loading dock to the machine's permanent location is free and clear of obstructions.	☐
Business location/area.	☐
Residential location/area.	☐
Labor requirements:	
Two people capable of lifting 50 lbs. (23 kg) will be on hand to assist the technician on the first day of installation.	☐
Work area and operating requirements:	
Has sufficient work area clearance on all sides of the machine as shown on in Appendix A.	☐
The floor is level and free of debris.	☐
There is a clean area for storage of media. Media should not be stored on the floor.	☐
Will store the shipping crates in its original condition for use during reshipment.	☐
Warranty acceptance:	
I have read and understand the Gerber M Turbo warranty and accept the terms and conditions.	☐

Customer Name: _____ Signature: _____

Title: _____ Date: _____

Company name: _____ Phone: _____

Service Technician Name: _____ Signature: _____