

Vibration-Free Platform

© Copyright 2010 Terra Universal Inc. All rights reserved. • Revised October 2010



Your Comprehensive Equipment Source





Vibration-Free Platform

Proprietary Notice

This manual pertains to proprietary devices manufactured by Terra Universal, Inc. Neither this document nor any portion of it may be reproduced in any way without prior written permission from Terra Universal.

Terra Universal makes no warranties applying to information contained in this manual or its suitability for any implied or inferred purpose. Terra Universal shall not be held liable for any errors this manual contains or for any damages that result from its use.

Safety Notice

A thorough familiarity with all operating guidelines is essential to safe operation of the product. Failure to observe safety precautions could result in poor performance, damage to the system or other property, or serious bodily injury or death.



CAUTION

Cautions are used when failure to observe instructions could result in significant damage to equipment.

The following symbols are intended to call your attention to two levels of hazard involved in operation:



WARNING

Warnings are used when failure to observe instructions or precautions could result in injury or death.

The information presented here is subject to change without notice.

1.0 Introduction

This manual provides information on installing and operating your Terra Universal Vibration-Free Platform.

By studying this document carefully, you can be assured of a long, efficient service life from the unit.

2.0 Description

The Vibration-Free Platform is constructed of a 304 stainless steel upper plate supported by four pneumatic all-axes isolators. These isolators act as highly stable air springs that isolate up to 90% of typical building vibrations.



This platform comes complete with four pressure gauges, pressure regulators, gas filling mechanism, tubing, and fittings. A plastic sheet on the bottom of electropolished stainless steel models encloses the vibration isolators to enhance cleanliness.

Clean, dry in-house air supply, bottled air, or nitrogen can be used for automatic inflation of the isolator mounts. Furthermore, a special safety feature prevents accidental over-pressures that can lead to the blow-up of isolators.



CAUTION: For best results, Terra recommends that the Vibration-Free Platform be operated with continuous line pressure applied to the safety regulator.

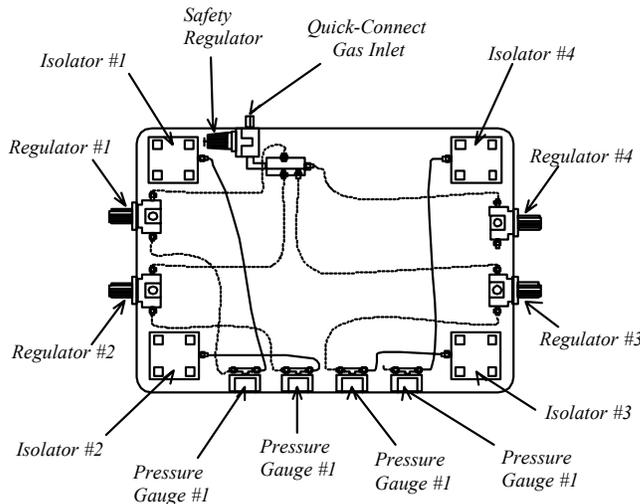


Vibration-Free Platform

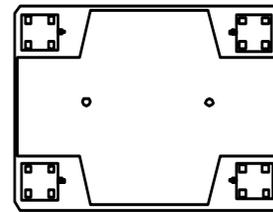
3.0 Installation

This unit is easy to install and use and requires little or no attention after the initial set-up. No special tools or mounting hardware is necessary for set-up; the platform comes completely assembled and ready for operation.

NOTE: The platform is generally factory-adapted to suit particular application requirements. Your unit may or may not include plate weights, depending on your order and the loads you indicate the system will carry. The instructions in this section indicate both how to make the proper inflation settings and how to install or remove plate weights to suit your application.



UNDERSIDE OF VIBRATION-FREE PLATFORM WITH PLATE WEIGHTS REMOVED



UNDERSIDE OF VIBRATION-FREE PLATFORM WITH PLATE WEIGHTS

1. Connect your in-house gas supply to the quick-connect inlet located on the rear of the platform. To make this connection, simply remove the collar from the end of the quick-connect fitting, press it onto the gas line, and then screw it back onto the fitting. This fitting can then be pressed onto the platform inlet until it locks in place.

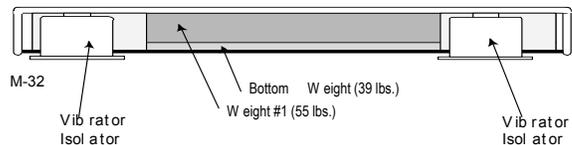


CAUTION: You may need an external pressure regulator if line pressure in your in-house supply is greater than 100 psi.

NOTE: The safety regulator is factory-set, and plate weights are installed in accordance with customer requirements before shipping. Under most circumstances, no further adjustment is required. Follow steps 2-4 below only if you experience problems with any of these set-up conditions.

2. Turn the platform over to expose the safety regulator located immediately inside the gas inlet. If your platform incorporates a plate weight that covers the regulator, remove it (by removing the two set screws on the bottom of the plate). If you have an electropolished stainless steel platform, you will need to remove the plastic bottom cover.

3. This safety regulator should be set at no more than 60 psi to protect the isolators against the possibility of overpressure. To make this setting, open the four regulators located on the sides of the platform; then open the safety regulator until the gauges (on the front of the unit) read just under 60 psi. Lock





Vibration-Free Platform

the safety regulator in this position (by pressing the knob in). Close the four external regulators (so that all gauges read "0") before proceeding



CAUTION: Never operate the platform with more than 60 psi, or damage to the isolators could result.

Once this setting is made, you are assured that pressure to the four isolators will remain within a safe range, even if the regulators on the sides of the platform are opened all the way.

4. Reinstall the bottom plate weight and plastic cover (if your platform incorporates them) and turn the unit right-side up. Make sure that the external regulators are closed.
5. Place the equipment you will be using on the top plate in the desired position. To level the platform, slowly open the external regulators until the platform rises off of the table.

If the platform fails to rise high enough...

...then your load is too heavy. In that case, you must remove one or more of the plate weights located beneath the platform in order to reduce the net weight of the unit.

If the platform inflates completely with very little pressure, or the system doesn't deliver adequate vibration damping of the frequency you are experiencing...

...then your load is too light. To compensate, you need to add one or more plate weights to increase the net weight of the unit. This additional weight will provide more effective attenuation of the vibration frequency to which your system is exposed.

If you must alter the plate weights, be sure to deflate the isolators before removing the load.

6. Plate weights are secured to the platform by means of the two hex screws located in the top center and bottom of the unit. The top two screws attach the first weight; if a second is required, you can attach it to the existing weight at the bottom.



CAUTION: Never operate the Vibration-Free Platform with a net load of over 280 lbs. (sum of plate weights and top load). Generally, if your equipment weighs over 100 lbs., you should remove all plate weights. If it exceeds 200 lbs., you should use the Vibration-Free Work Station, which is designed for heavier loads.

Vibration-Free Platform		
Work Surface Dimensions	Maximum Load*	Shipping Weight
213/4 x 181/4 x 3	213	163
23 x 24 x 3	213	203

Always deflate the isolators before removing the load, or damage could result.

For optimal results, operate the platform under a continuous line pressure.

* Internal plate weight should

7. Once you have adjusted the weights properly, place your load on top of the platform and inflate the isolators until the platform rises to the proper level.

Now, carefully adjust the external regulators until the platform surface is level. The illustrations indicate which regulator and pressure gauge controls which isolator.

Pressure levels in the isolators may vary somewhat, depending on the weight and distribution of the top load. Once you make the correct settings, lock the regulators in place (by pressing the knob into the unit). Keep in mind that you must re-level the platform if you reposition the load.



Vibration-Free Platform

4.0 Specifications

Plate Weights: 55 lbs and 39 lbs

Note: Load must be placed atop platform before inflating isolators. Maximum inflation pressure must not exceed 40 psi. Isolators must be deflated before removal of load.

Platform Material: 304 Stainless steel (electropolished)
Air Inlet: Quick-connect/disconnect for 1/4"-diameter nylon tubing



5.0 Warranty

Products Manufactured by Terra: Terra Universal, Inc., warrants products that it manufactures to be free from defects for a period of 12 months for parts and 90 days for labor, commencing from the date of shipment. Terra's sole responsibility is to repair or replace, at its option, any part of the product that proves defective or malfunctioning during this time limit. In some cases, components incorporated in Terra Universal products are covered by additional warranties from component manufacturers; obtain specific information from Terra sales representatives. This warranty is void if the equipment is abused or modified by the customer, is operated outside Terra's operating instructions or specifications, or is used in any application other than that for which it is specified. This warranty does not include routine maintenance or service procedures, breakage of quartz baths after 60 days, shipping damage, nor damage from misuse, intentional or unintentional abuse, neglect, natural disasters, or acts of God.

Products Manufactured by Others: Terra Universal, Inc., warrants that, to the best of its ability, Terra's representations of products that are manufactured by others reflect the manufacturer's representations, subject to change without notice. Sole warranty for these products is the original manufacturer's warranty that is passed forward to the purchaser and constitutes the customer's sole remedy for these products. Detailed warranties for distributed products are available through Terra sales representatives.

Freight Shortage or Damage: Upon receipt of any equipment from Terra Universal, Inc., customer shall immediately unpack and inspect for damage or shortage. The customer shall not accept a damaged package or a short shipment until the carrier makes a "damage or shortage" notation on both the carrier's and customer's copy of the freight bill or delivery receipt. Service title passes when the shipment is loaded, so customer is responsible for filing and collecting a freight claim. Any replacement products must be ordered and paid for separately. For Terra's "Policy and Procedures for Returning Goods," see Terra's Internet site: www.TerraUniversal.com.

Generally, customers can improve the chance of collecting on a freight claim by following these procedures: 1) formally requesting that the carrier inspect the shipment immediately upon suspecting damage or shortage to verify condition; 2) notifying the carrier upon discovery of concealed damage and requesting an inspection within 15 days of receipt, both in person or phone and following up via mail; 3) keeping the shipment as intact as possible, including retaining original packaging materials and keeping the product as close to the original receiving location as possible; 4) holding salvage for disposition by the carrier.

All Claims: Terra Universal expressly disclaims all other warranties, expressed or implied or implied by statute, including the warranties of merchantability or fitness for intended use. Terra Universal is not responsible for consequential or incidental damages arising out of the purchase or use of the products supplied by Terra Universal. Terra Universal is not liable for damage to facilities, other equipment, products, property or personnel of others, or of their agents, suppliers, or affiliated parties, which is caused or alleged to have been caused by products supplied by Terra Universal. In any event or series of events, Terra Universal's total liability for any and all damages whatsoever is limited to the lesser of the actual damages or the original invoice cost of the items alleged to have caused the damage. The customer's sole and exclusive remedy for any cause of action whatsoever is repair or replacement of the non-conforming products or refund of the actual purchase price, at the sole option of Terra Universal. All claims must be made in writing within 90 days of the date the product was shipped. Any claims not made within this time limit shall be deemed waived by the customer. Terra Universal is not responsible for any additional costs of repair caused by poor packaging or in-shipment damage during return.

Warranty Returns: All warranty returns must be authorized in advance by Terra Universal and approved under an RMA. Unless approved in advance for good reason, all returns must be in original condition, including all manuals, and must be packaged in original packaging materials. All returned goods are to be shipped to Terra Universal, freight prepaid at customer's expense. See Terra's "Policy and Procedure for Returned Goods."

*Thank you for ordering from
Terra Universal!*