

Onyx Series User Guide – Manual Load Adjustment

INTRODUCTION

The Onyx vibration isolation table is designed to isolate sensitive equipment from vibrations caused by foot traffic, HVAC systems, nearby operating machinery, etc. It consists of a black powder coated steel tabletop supported by three to four pneumatic isolators, which are easily inflated using a hand pump or automatic air source. When properly inflated, these isolators will reduce the transmission of vibrations to the tabletop, providing a vibration-free work surface for sensitive equipment.

INSTALLATION PROCEDURES

1. Place the Onyx vibration isolation table on a flat and level surface. Be sure the surface can safely support the weight of both the Onyx and the equipment to be placed on it.
2. Place the instrument on the Onyx table, ensuring the air-valves are facing forward.
 - a. The back of the Onyx table (the side without air valves) bears a higher load capacity than the front.
3. Remove the valve covers.
4. Use a pump (one provided) to pump air through each valve until the Onyx table rises to a height of approximately 2.3 inches (59 mm). The diagram found below illustrates the controls of each valve.
5. **IMPORTANT:** Do not exceed 70 psi (0.5 MPa, 5 kg/cm²), Onyx's maximum pressure.
6. Level the Onyx to its optimal height range of 2.32 ± .11 inch (59 ± 3 mm). For best performance, maintain the tabletop uniformly leveled by inserting or bleeding air through each of the valves.
7. **NOTE:** Practically speaking, lower operating height provides better vibration isolation, however, it is recommended to operate at mid height range to achieve optimal sway space.
8. Replace the valve covers.
9. Check the Onyx approximately every two weeks to ensure it is operating at its optimal height. Should adjustments be necessary, repeat steps 3 to 6.



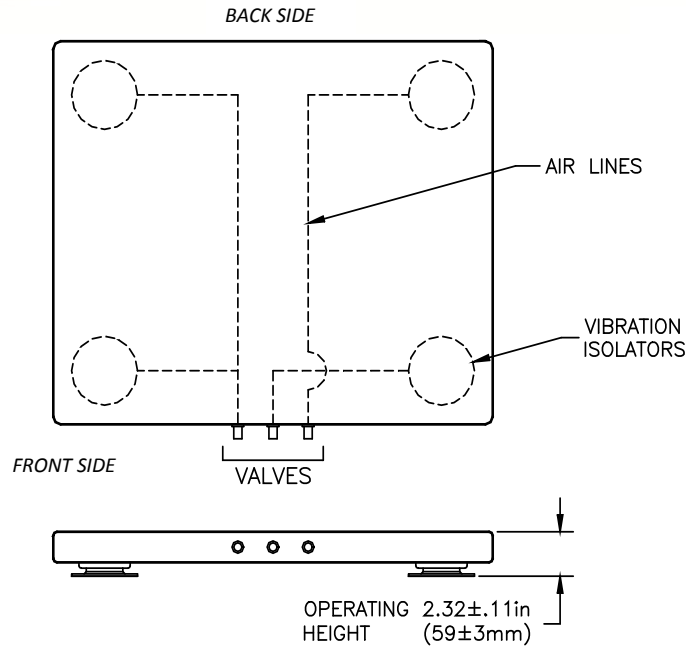


Figure 1

****PLEASE NOTE** – Orientation of vibration isolators is used as an example; not indicative of actual table placement.

Onyx-6M and Onyx-7M have three vibration isolators; Onyx-8M has four vibration isolators

GENERAL SPECIFICATIONS

Model Number	Onyx – 6M	Onyx – 7M	Onyx – 8M
Dimensions (In./mm)	L 16 x D 17 x H 2.3 in. (406 X 531 X 58 mm)	L 20 x D 24 x H 2.3 in. (508 x 609 x 58 mm)	L 32 x D 24 x H 2.3 in. (812 x 609 x 58 mm)
Table Weight (Lbs/Kg)	47 Lbs (21.3 Kg)	77 Lbs (35 Kg)	110 Lbs (50 Kg)
Max. Load Capacity (Lbs/Kg)	150 Lbs	150 Lbs	200 Lbs
Natural Frequency (Hz)	Vertical: less than 2.5 at max. load Horizontal: less than 2.5 at max. load		
Leveling Type	Manual		
Surface Top	Black Powder coated Steel		



BEST PRACTICES

Maintaining the longevity of an air-based isolation system requires minimal, but necessary effort to ensure optimal vibration isolation. Provided below are some recommended practices when operating an Onyx System.

- Ensure the load capacity of the instrument does not exceed the load capacity of the respective Onyx table. If the weight of the instrument cannot be properly supported, air can begin to leak and prevent the table from isolating vibrations.
- Ensure the valves are facing forward as the higher load bearing side is in the back to account for a disproportionate weight distribution.
- Do not over-inflate the system; this can damage the air suspension system. Inflate the system gradually to avoid over-inflation.
- Check that system is floating once every two weeks.
- Deflate the table prior to moving the table or the equipment on top of it.
- Avoid the following when using an air-based isolation system: Direct sunlight, Ozone environments, Volatile solvents, Oils, and Excessive or unbalanced loading.
- Contact Herzan prior to drilling any holes in the system. There is a danger of puncturing the air suspension system.
- When transporting to a new location after installation, contact Herzan for advice on packing. Whether it is verifying air levels being distributed to the isolators or orientating the instrument to the center of the isolation system, periodic checkups help ensure long lasting performance.



TROUBLESHOOTING

ISSUE: There is a persistent leak in my Onyx table and it won't stay inflated.

- The first step in finding a solution for a leaking Onyx table is to determine where the source of the leak originates. To determine the source of the air leak in the Onyx table, you will want to spray 'soapy' water on the underside of the table near the air tanks (black rectangular tanks) and cable fittings (where the cable connects to the tanks and air valves).
- If there is a leak in either of these locations, you will notice bubbling occurring due to the escaping air interacting with the soapy water. If you do not see bubbling stemming from the underneath of the table, then the air leak must be located in the air valves on the front.
- Spray soapy water on the front air valves to determine whether the leak is coming from either of the three front air valves. Make sure to remove the valve cap prior to spraying soapy water on the air valves. Please follow the below instructions once you have determined the location of the air leak.
- **Air Leak Source: Front Air Valves** - If you experience the air table is deflating within a short amount of time (0-3 days), please check to see if the valve pin inside the three front air valves is properly secured and has not been loosened during table inflation. The middle valve cap (the valve cap with the two grooves; please see figure 2.) is to be used as a valve wrench to tighten and secure the valve pin. You will want to rotate the valve wrench clockwise to tighten the air valves, ensuring there is no leaking.
- **Air Leak Source: Fittings/Air Tanks** – If the fittings have become loosened over time or due to rough shipment, then you will want to tighten them, rotating the fittings clockwise to ensure they are firmly fastened. If there is a leak in the air tank, the table will need to be sent to the factory for repair (please call: (949) 363-2905 or email: support@herzan.com).
- Once you have tightened the air valves and fittings and there still seems to be a persistent leak, please call the Herzan office and we will be happy to assist you further.



Figure 2

For troubleshooting information please visit:

<http://herzan.com/support/troubleshooting/air-based-isolation.html>