HAMILTON AIR®
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Customer unit carrier landing speed Adjustment Instructions

Typical adjustment instructions for HA1000, HA45, and HA50 customer units.

Carrier landing speed:

The carrier landing speed is the rate in which the incoming carrier travels down the vertical tubing after passing the vacuum air take off port. Typically the air take off port is located in the snorkel fitting on top of the acrylic tubes or a port in the ninety degree (90°) bend located above the unit. The carrier should slow down as it passes this air take off port when traveling in both directions of the tube system. New systems may require adjustments to set correct carrier landing speeds.

Teller carrier landing speed:

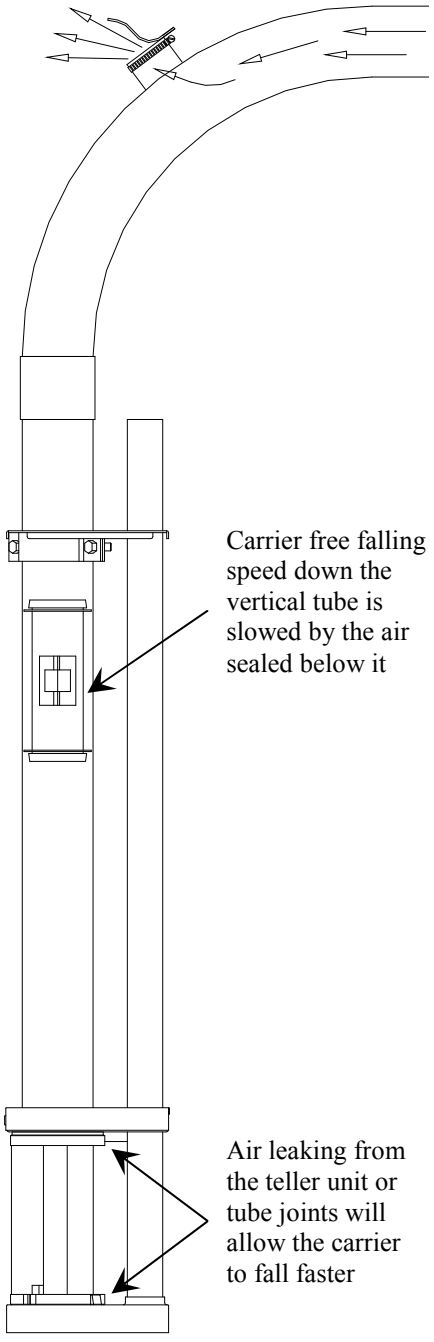
The carrier traveling towards the teller unit is being pushed by a pressure motor forcing air into the tube from the customer unit.. This air is being released from the tube system through the air take off port located above the teller unit. Typically this air take off port is located in the ninety degree bend located above the teller unit and will have a check (flap) valve to let air out but not back in this port. After the carrier passes this port, the carrier is no longer being pushed by the pressure so the carrier must now free fall down the vertical tube. The rate of speed in which it falls depends on the air resistance created by the sealed teller unit and tubing.

A leaking teller unit or tubing from the teller unit up to the air take off port will increase the speed of the carrier free falling. Any air released from under the carrier after it has passed the air take off port will increase the speed in which the carrier falls. The faster the carrier falls the harder its landing in the teller unit.. These hard landings can cause damage to the teller unit, carrier, and carrier contents..

Also note that the carrier air disc can become worn down smaller than normal which will allow the air trapped below the carrier to escape around the carrier as it is falling.

To reduce the carrier landing speed at the teller terminal, the air leaking from the unit or around the carrier air disc must be slowed or stopped. Replacing the worn carrier air disc may help some but the air leaks from the teller unit must be repaired.

A carrier landing too softly or taking too long to drop down the teller vertical tubing can be adjusted by intentionally letting air out of the bottom of the teller unit. In the bottom of the teller unit under the carrier bumper is a check valve to let air into the teller unit but not let the air out. Trimming this flap to intentionally let a small amount of air out from under the carrier will increase the landing speed.



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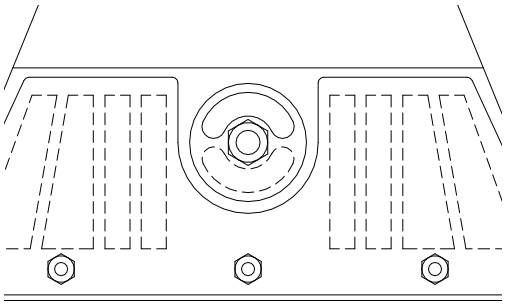
Customer carrier landing speed:

The carrier traveling towards the customer unit is being pulled by a vacuum motor connected to the air take off port. After the carrier passes this port, the carrier is no longer being pulled by the vacuum so the carrier must now free fall down the vertical tube. The rate of speed in which it falls depends on the air resistance created by the sealed customer unit and tubing.

A leaking customer unit or tubing from the customer unit to the air take off port will typically allow the vacuum motor to draw air in through these leaks. The air entering these leaking areas will travel up the acrylic tube towards the air take off port. This air travelling upwards in the vertical tube will cause the carrier to stop and hover or float. When the vacuum motor shuts off and the customer unit door starts to open, the air below the carrier is released rapidly allowing the carrier to drop exceedingly fast and land extremely hard in the customer unit. Hard landings like this can cause damage to the customer unit, carrier, or carrier contents.

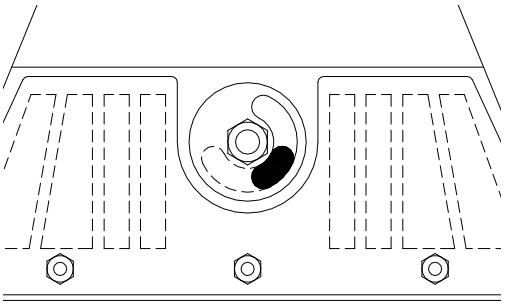
The leaky areas letting air into the customer unit or the tubing should be sealed off as best as possible. If the leaks are all sealed and the carrier stills falls really slow or floats in the vertical tube, vacuum can be allowed to draw some of the air from below the carrier to increase the carrier landing speed.

The HA45 customer unit has an adjustable valve for the purpose of setting the carrier landing speed. The valve is the small round gold colored disc located in the carrier compartment in front of the carrier landing pad.

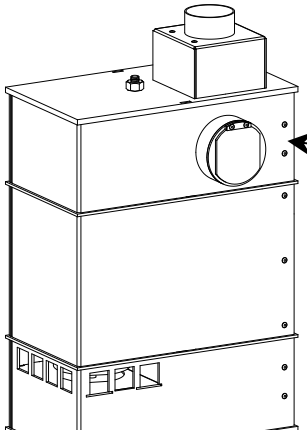


The carrier landing speed valve shown to the left is completely closed.

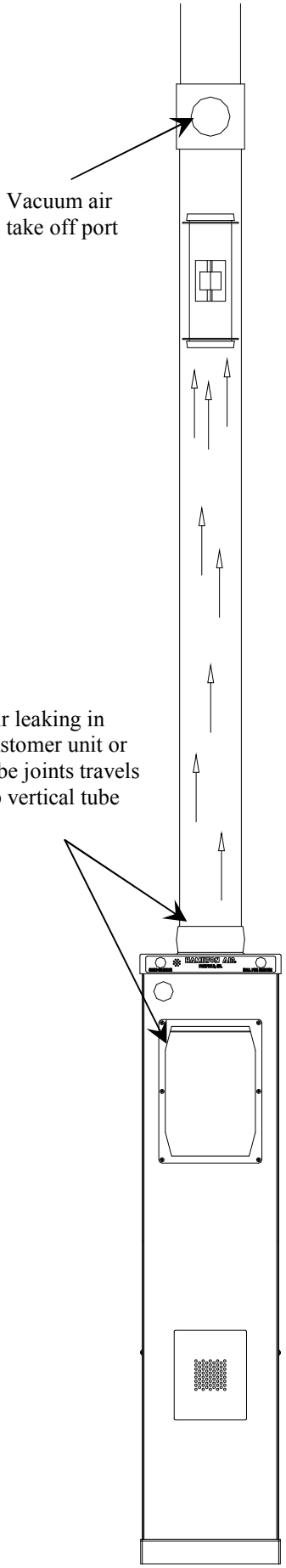
Shown to the right, the valve has been rotated to open a section through the valve and increase the carrier landing speed.



The HA1000 requires the lower check valve to be trimmed to allow a small amount of air through when the system is running in the vacuum mode. This will not affect the system while running in the pressure mode.



Lower check valve on HA1000 turbine pack



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