WILLIAM E. BOEING DEPARTMENT OF
AERONAUTICS & ASTRONAUTICS
College of Engineering

AA421
Test Stand Size Verification

SPACE Lab

Part Name: _____

Part Number: _____

Date: _____ / _____ / _____
yyyy mm dd

Results: _____

Test Team:

Name	**Initials**

Test Objective

Verify through measurement that chamber interface requirement Ci.1 is met by the test stand fitting into the crystal vacuum chamber, which has a radius of 15 inches. CAD has shown that this test stand design will fit in both vacuum chambers in SPACE Lab (VC-01 and VC-02) and this test procedure will verify the sizing of the manufactured test stand matches the sizing of the CAD design of the test stand. The chamber interface structure, leveling system structure, and pendulum frame all must be measured to verify the test stand will fit into the vacuum chambers before system assembly.

Equipment Required

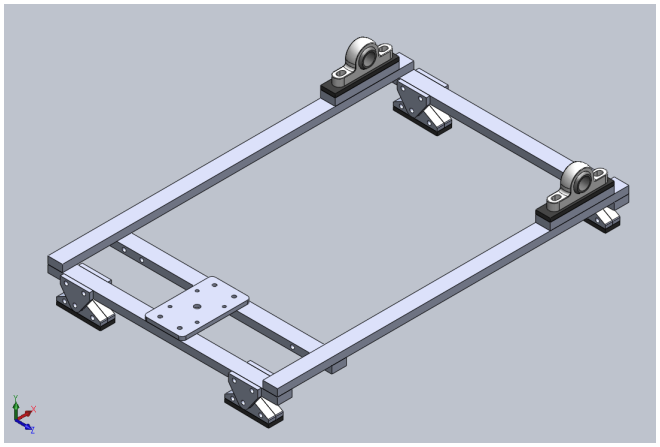
Qty	Description	Specs/Calibration	Check
1	Chamber interface subassembly (p/n-CIA1)		
1	Leveling system subassembly (p/n-LSA1)		
1	Test stand frame (p/n-FA1)		
1	Digital calipers	0-24”	

Test Procedure

1 Setup

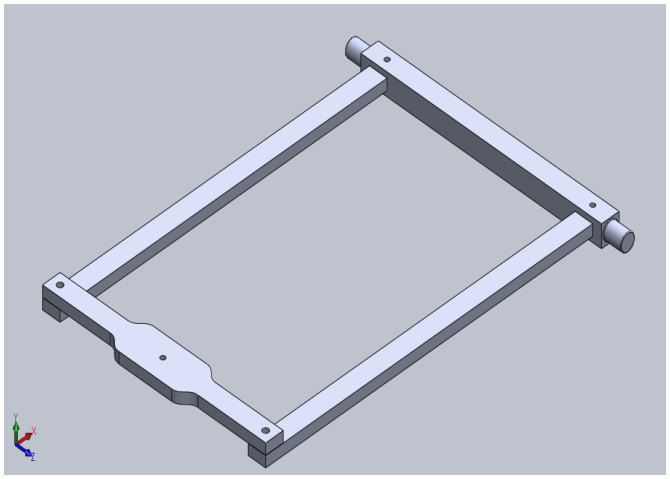
Assemble chamber interface subassembly (p/n-CIA1)per assembly procedure

OK?_____



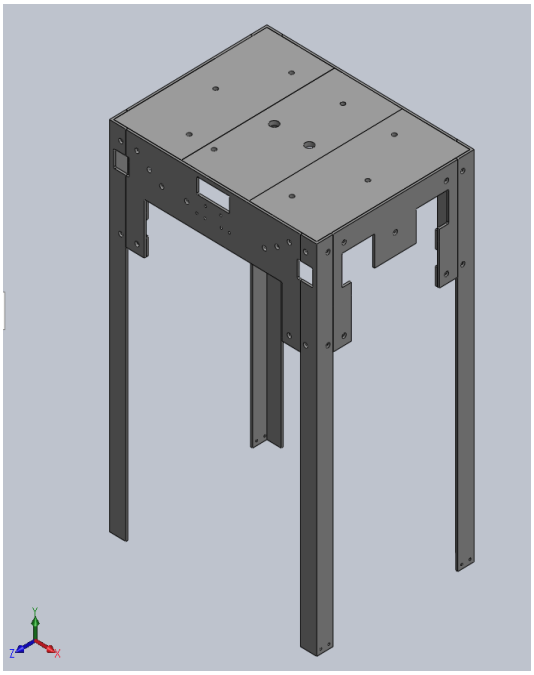
Assemble leveling system subassembly (p/n-LSA1) per assembly procedure

OK?_____



Assemble test stand frame (p/n-FA1) per assembly procedure

OK?_____



2 Test

Measure height of chamber interface subassembly (p/n-CIA) for bottom of the lower feer (p/n-CIF1) to the top of the dry running mounted sleeve bearing (p/n-SB1) at the bolt hole, as indicated by red arrows, using calipers

_____in

Compare this to dimensions in CAD, 3.87 +/-0.1 inches OK?_____

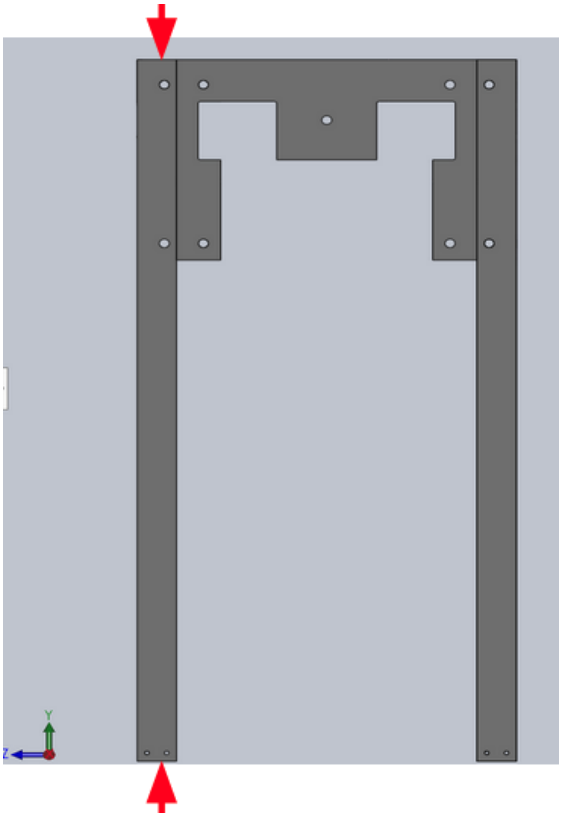
Measure height of leveling system subassembly (p/n-LSA1) from bottom of longitudinal strut (p/n-LS1) to top of radial strut (p/n-RS1) using calipers

_____in

Compare this to dimensions in CAD, 1 +/-0.025 inches OK?_____

Measure height of test stand frame assembly (p/n-FA1) from bottom of leg (p/n-LG1) to top of frame using calipers

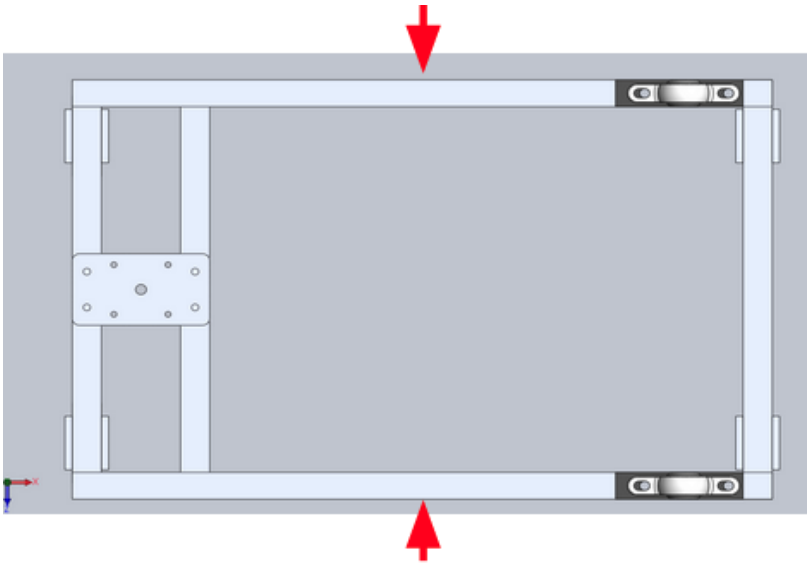
_____in



Compare this to dimensions in CAD, 21 +/-0.525 inches OK?_____

Measure width of chamber interface subassembly (p/n-CIA1) from outboard side of longitudinal strut on left hand side of chamber interface subassembly to outboard side of longitudinal strut (p/n-LS1) on right hand side of chamber interface subassembly

_____in



Compare this to dimensions in CAD, 15.7 +/-0.3925 inches OK?_____

4 Shut down

Stow calipers in box to return to AA machine shop

OK?_____

Stow all test stand sub assemblies in a box and return to AERB 139

OK?_____

Change Log

Ver	Date	By	E-mail	Change
1.0	04/25/2024	Adam Delbow	adelbow@uw.edu	Initial release.