



Figure 7. The test section of the Virginia Tech Boundary Layer Wind Tunnel configured for the $Re_{\theta} = 5940$, wing-body junction flow.



Figure 8. The window that is molded to the curvature of the 6:1 prolate spheroid model at $x/L = 0.600$. The window provides optical access to the flow field for the LDV laser beams.

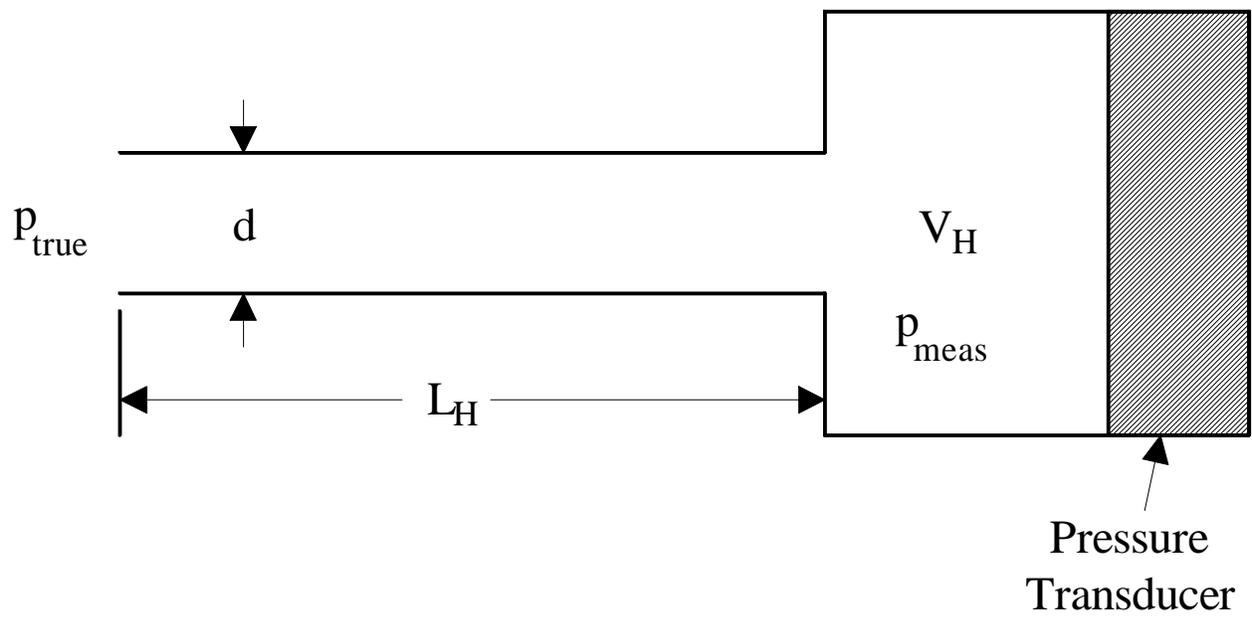


Figure 9. Sketch of an ideal Helmholtz resonator.

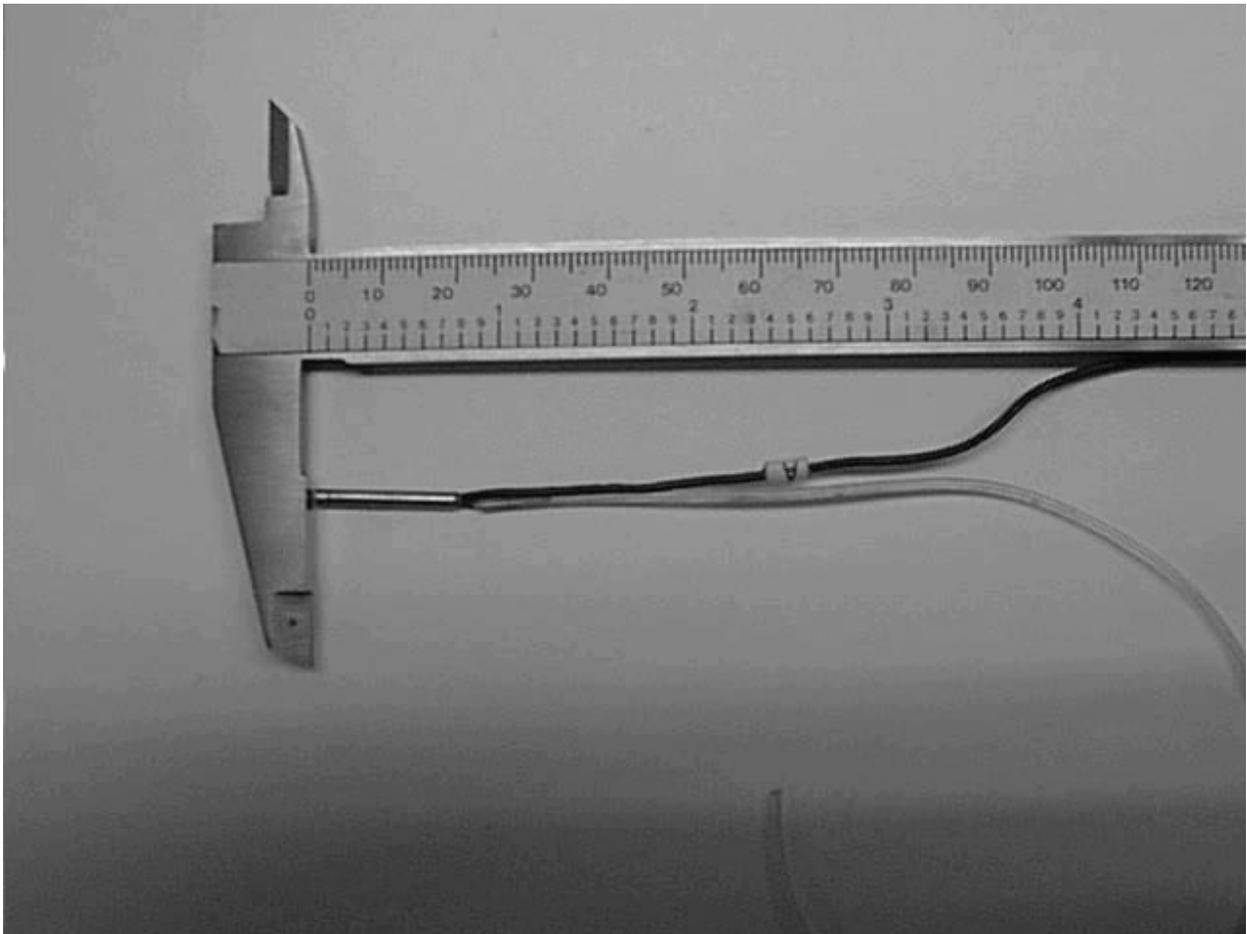


Figure 10. The Endeveco model 8507-C2 pressure transducer.

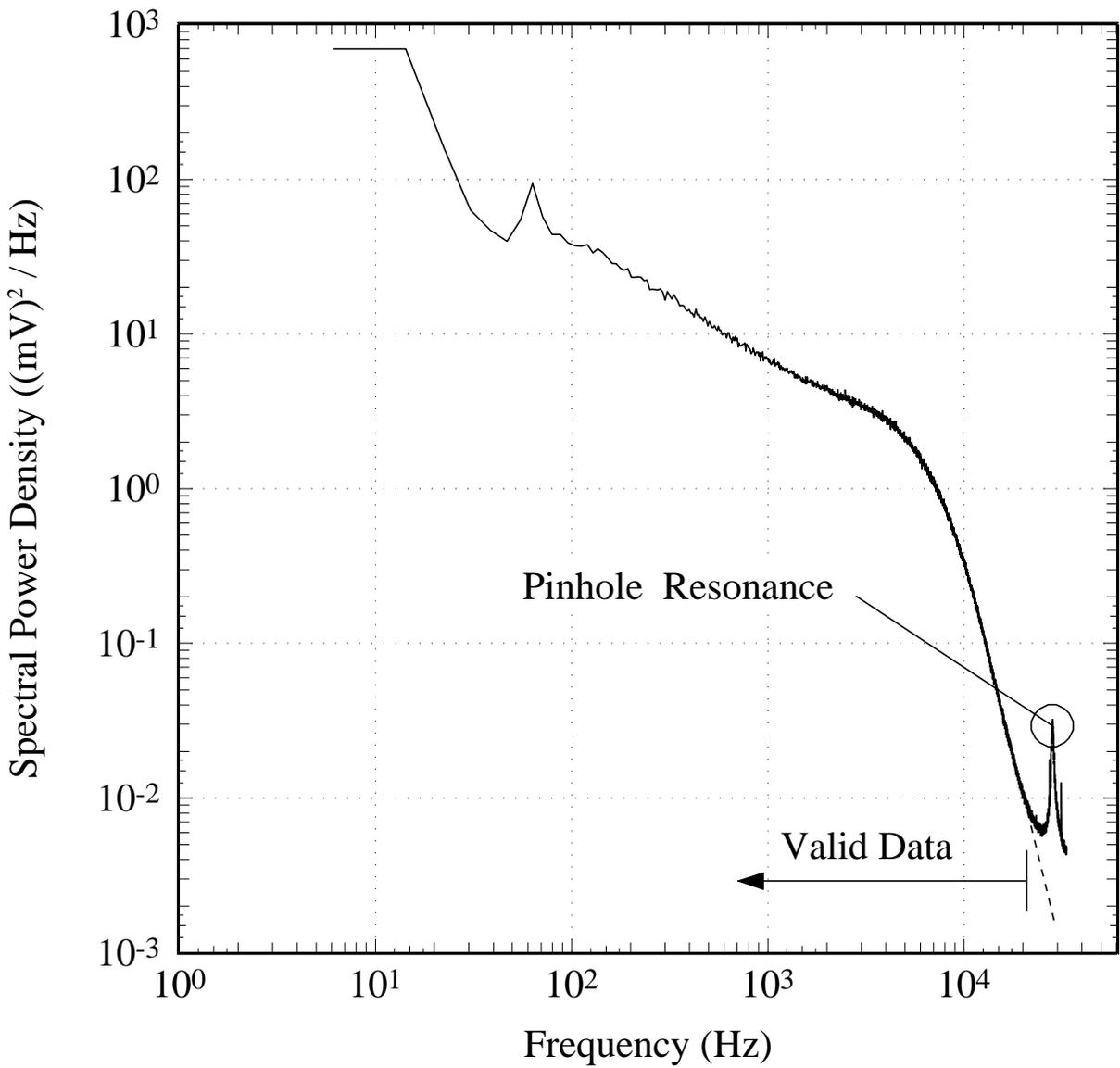


Figure 11. The spectral power density of the uncalibrated pressure transducer signal measured beneath a two-dimensional boundary layer ($Re_{\theta} = 23400$). The dashed line shows a power law decay with a constant exponent.

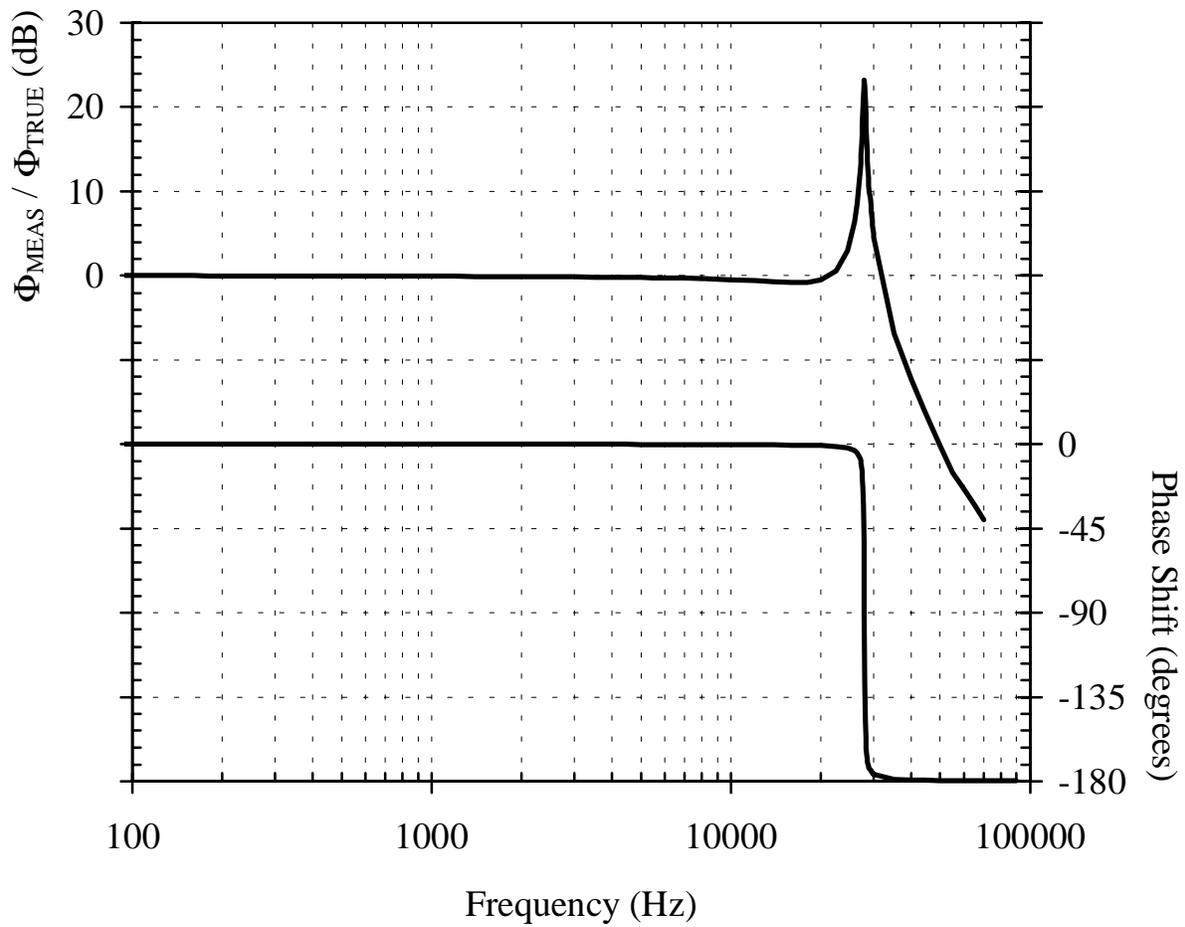


Figure 12. The amplitude and phase response of the pinhole mask that was used in conjunction with the p measurements in the two-dimensional and wing-body junction flows. The amplitude response shown is that of a Helmholtz resonator (equation 35) that is attenuated at high frequencies using the values given by Corcos (1963), assuming $U_C = 14u_\tau$, in order to account for finite pinhole size. The phase response shown is that of a Helmholtz resonator (equation 36).

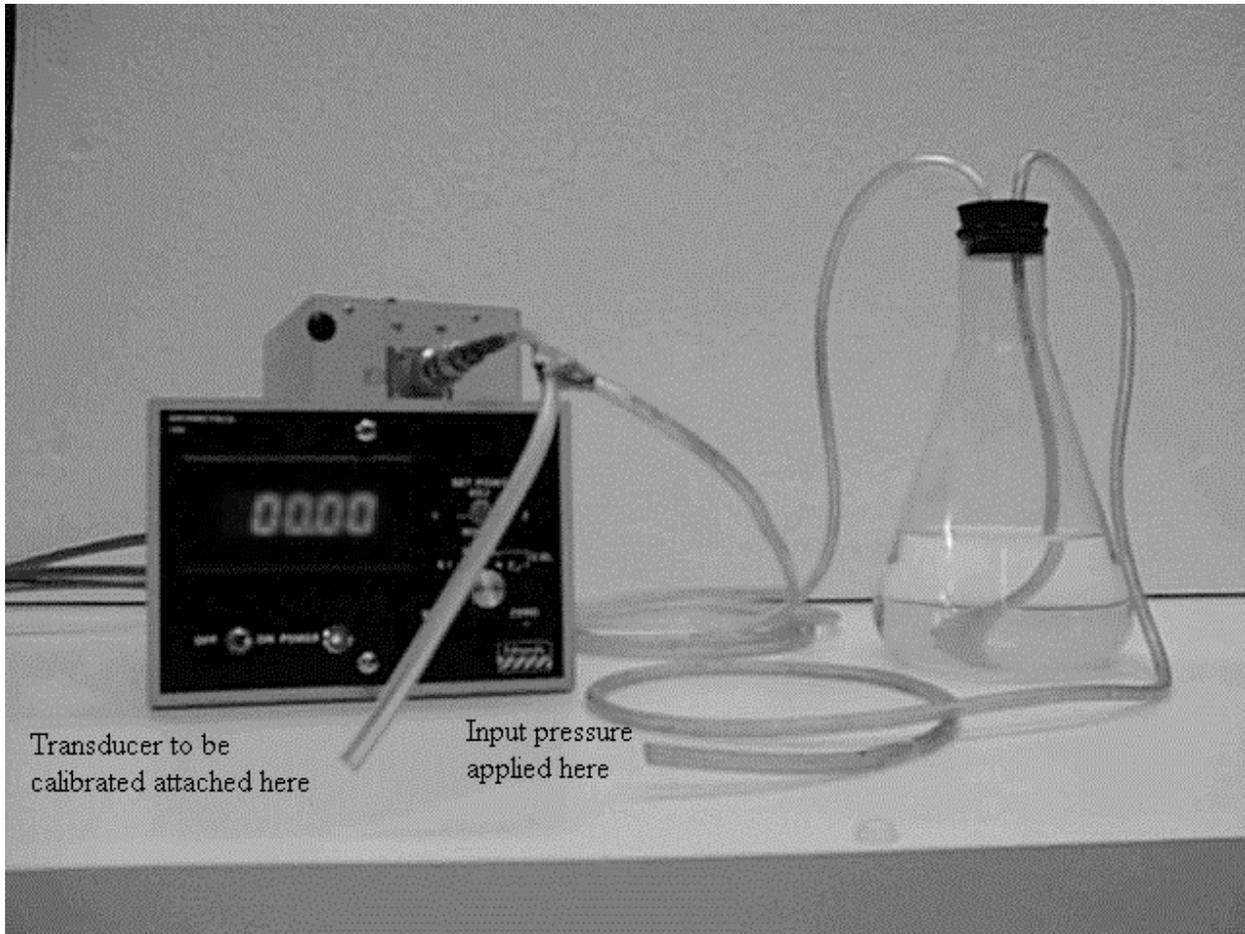


Figure 13. The beaker-tubing arrangement that was used to perform the static calibration of the Endevco pressure transducer.



Figure 14. The pressure transducer housing unit used to measure p beneath the two-dimensional boundary layer and wing-body junction flow. The pressure transducer is held inside the cap (left) with clay. The outer diameter of the shaft of the housing unit is 0.537 inches.

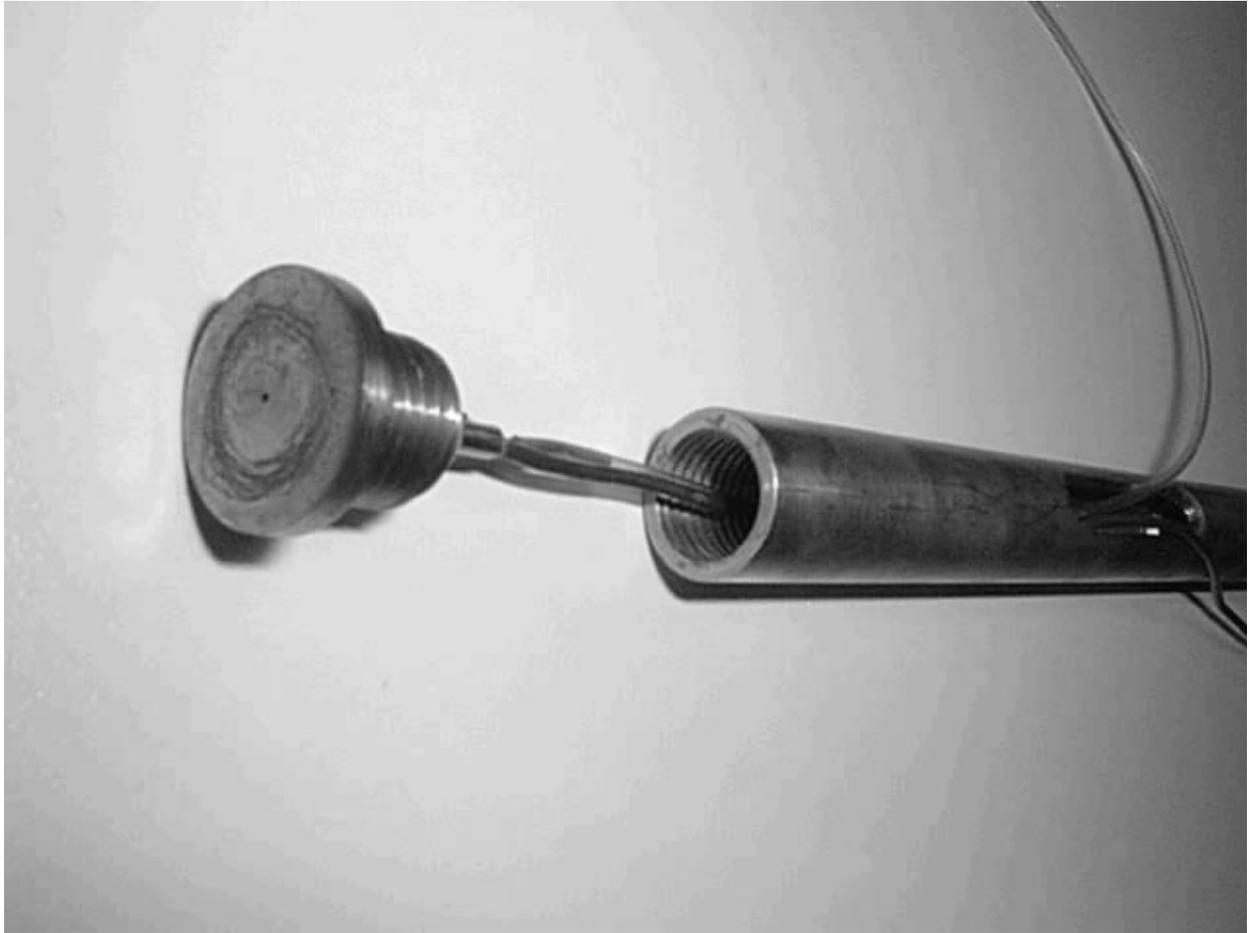


Figure 15. Close-up view of the pressure transducer housing unit in figure 14 showing details of the 0.5 mm pinhole mask.