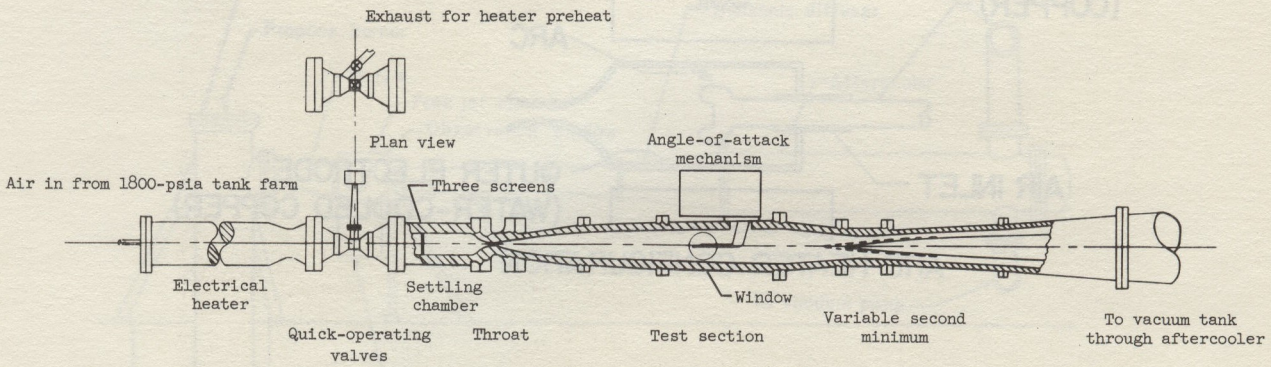
LANGLEY HYPERSONIC FLOW APPARATUS



The Langley hypersonic flow apparatus is located in Building 583 and is under the direction of the Full-Scale Research Division. This facility is used for force, pressure, heat transfer, and flutter testing. The test medium is air heated by a 2000-kVA dc resistance heat exchanger. Model mounting consists of sting and circular-arc strut. Side-wall model mounting is possible by replacing the schlieren window. Contoured axially symmetric nozzle is 0.513 inch in diameter, test section is 15 inches in diameter, and test core is 10 inches in diameter. It exhausts into a vacuum tank. Examples of operating conditions are as follows:

Stagnation pressure, psia	800 to 1200
Stagnation temperature, ^{o}R	1500 to 1760
Enthalpy, Btu/lb	425
Mach number	10.03
Reynolds number per foot	1.3×10^{6} to 2.0×10^{6}
Running time, sec	180