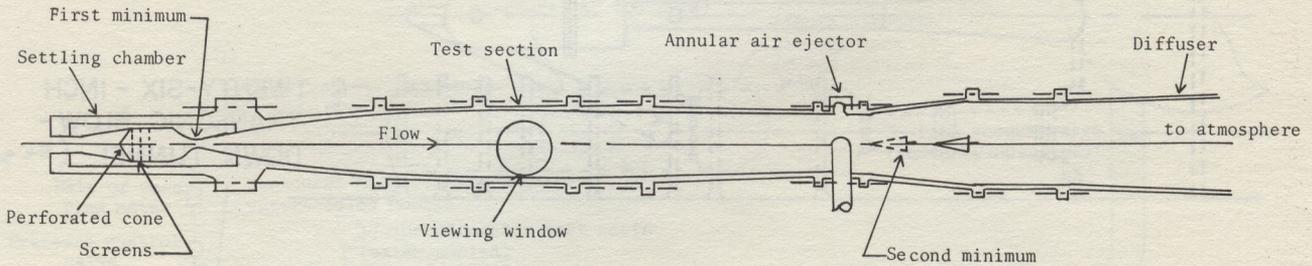


LANGLEY 20-INCH HYPERSONIC TUNNELS

Langley 20-Inch Hypersonic Tunnel (Mach 8.5)



The Langley 20-inch hypersonic tunnel (Mach 8.5) is located in Building 1247D and is under the direction of the Aero-Physics Division. This tunnel is used for heat transfer, pressure, and force testing. The test medium is air and is heated by an electrical resistance heater. Model mounting consists of a sting support and model injection mechanism. It has an axially symmetric contoured nozzle. The test section is 21 inches in diameter, and the test core is 16 inches in diameter. It exhausts through movable second minimum to atmosphere with aid of annular ejector. Examples of operating conditions are as follows:

Stagnation pressure, psia	1600 to 2500
Stagnation temperature, °R	1510
Mach number	8.5
Reynolds number per foot	4.8×10^6 to 7.5×10^6
Running time (maximum), min	7