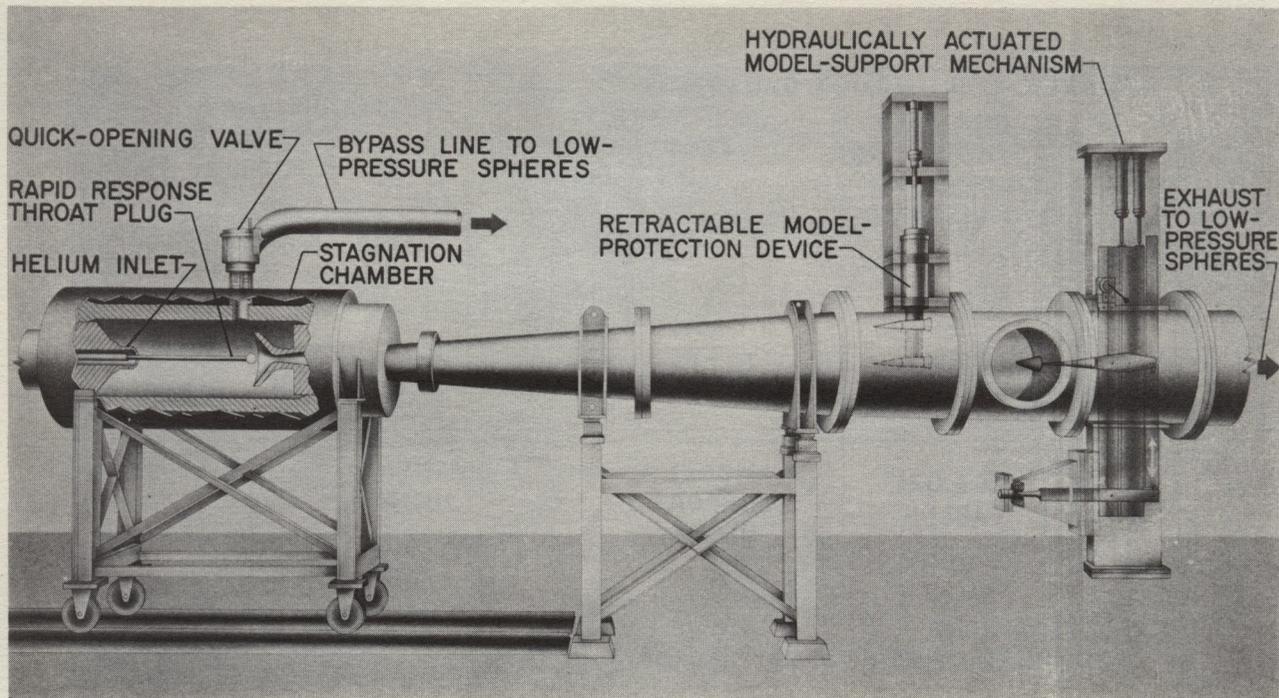


LANGLEY 22-INCH HELIUM TUNNEL



L-1719

The Langley 22-inch helium tunnel is located in Building 1247B and is under the direction of the Aero-Physics Division. This tunnel is used for force, pressure distributions, and heat-transfer tests. The test medium is purified helium. Test medium is supplied at ambient temperature or temperatures up to 400° F through electrical resistance heater. Model mounting consists of a vertical strut. The test section is 22.5 inches in diameter and the test core is 8 inches to 10 inches in diameter and it exhausts into a vacuum tank. Contoured nozzles supply discrete Mach numbers of 18 to 24; however, only the Mach number 20 nozzle has been calibrated. Examples of operating conditions are as follows:

Stagnation pressure, psia	500 to 3600
Mach number	18 to 24
Reynolds number per foot	3×10^6 to 15×10^6
Running time, sec	40 to 60