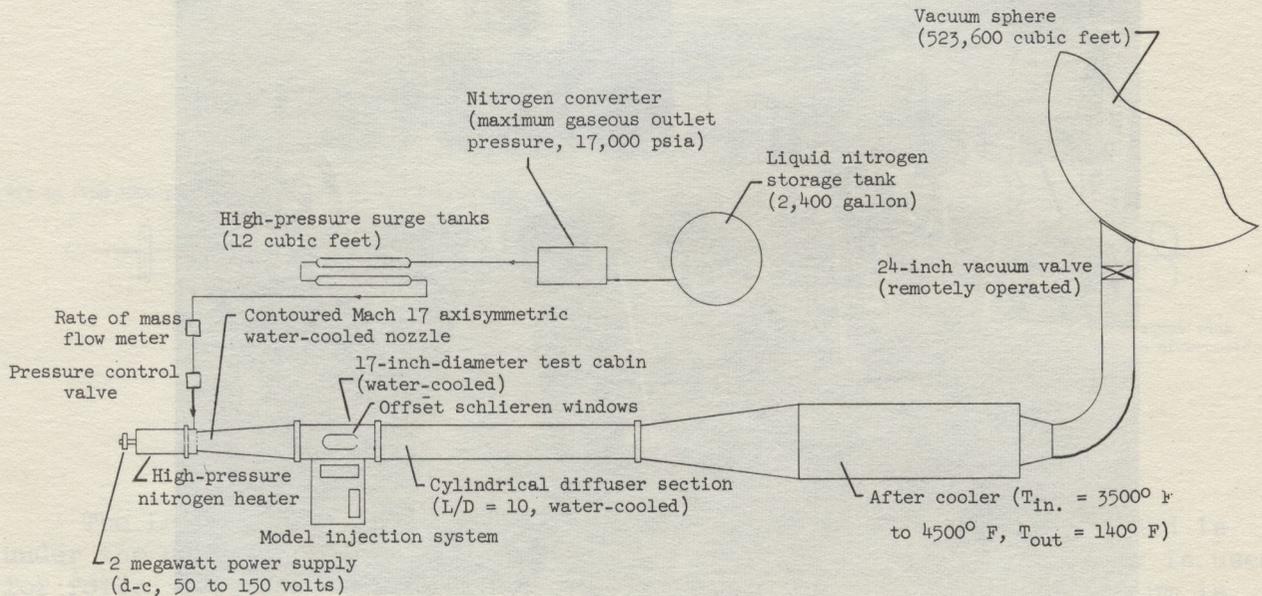


LANGLEY HYPERSONIC NITROGEN TUNNEL



The Langley hypersonic nitrogen tunnel is located in Building 1247B and is under the direction of the Aero-Physics Division. This tunnel is used for heat transfer and force studies with nitrogen as the test medium which is heated by a tungsten grid resistance heater. Model mounting consists of a 2000-psi hydraulic, quick-injection rate system. The tunnel has an axially symmetric contoured nozzle. The test-section diameter is 19 inches and the test core size is approximately 8 inches at high pressure. It exhausts into a 100-foot vacuum sphere. Examples of operating conditions are as follows:

| | |
|--------------------------------------|--|
| Stagnation pressure, psia | 15 000 max. |
| Stagnation temperature, °R | 4460 |
| Mach number | 18 |
| Reynolds number per foot | 0.155×10^6 to 0.785×10^6 |
| Running time, min | In excess of 30 |