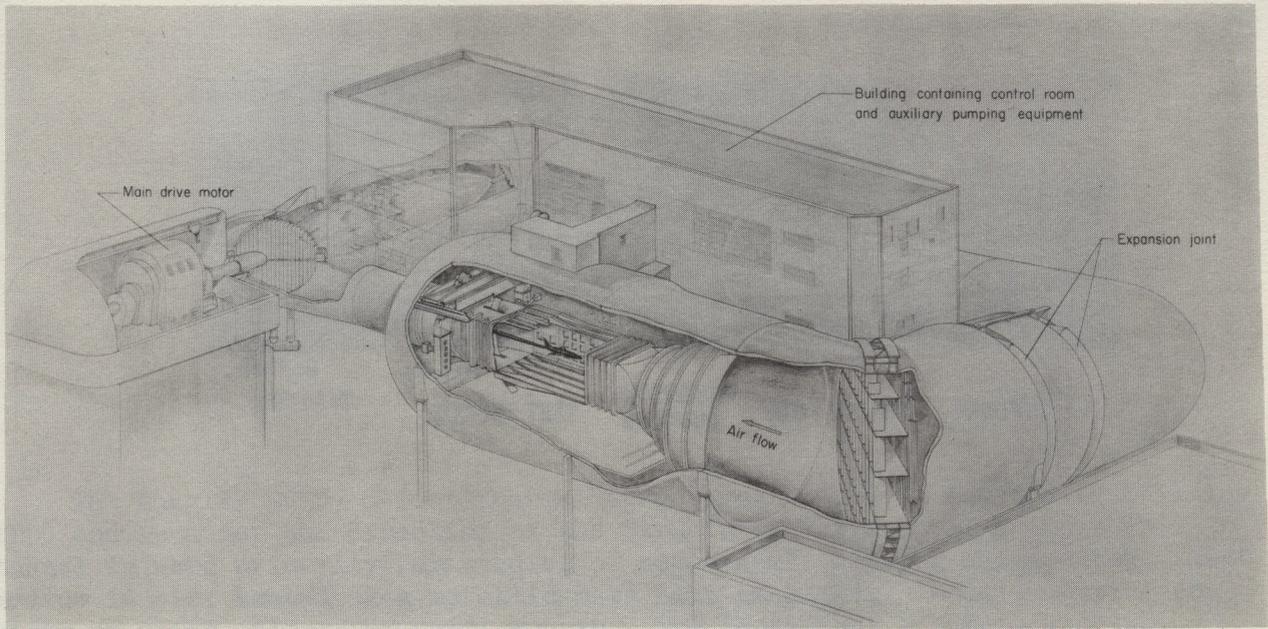


Max. Shaft horsepower : 25,000.
 Max. horsepower per 1 Elliott compressor : 4000 to 5000.

LANGLEY 8-FOOT TRANSONIC PRESSURE TUNNEL



85.51" (or 7.12') square

L-57-2529

The Langley 8-foot transonic pressure tunnel is located in Building 640 and is under the direction of the Full-Scale Research Division. The test medium is air. The tunnel has a sting-type model support system with tunnel wall mounts available. It is a single-return closed-circuit tunnel with Mach number continuously variable from 0.2 to 1.3. Stagnation pressure, stagnation temperature, and dewpoint temperature are controlled. Test section is 7.1 foot square. Examples of operating conditions are as follows:

Mach number	0.2	0.4	1.03	1.3
	to	to	to	
	0.3	1.0	1.2	
Stagnation pressure, atm	0.1	0.1	0.1	0.25
	0.25	0.25	0.25	to
	to	to	to	to
	2.0	1.7	1.4	1.0
Stagnation temperature, °R	580	580	580	580
Dynamic pressure, lb/sq ft	6	21	79	
	14	53	203	226
	to	to	to	to
	250	1333	1232	906
Reynolds number per foot	0.1	0.2	0.4	1.0
	0.3×10^6	0.6×10^6	1.0×10^6	1.0×10^6
	to	to	to	to
	3.6×10^6	7.0×10^6	5.9×10^6	4.2×10^6

Cross-sectional area, sq ft 50.3

Equivalent diameter, ft 8.01

Test 439: 2-D $c=36$ " wing. Ran at $1/8$ atm. 33
 at $M=0.8$ ($R=0.5 \times 10^6$ per ft) and at $1/7$ atm. at
 $M=0.60$. Used 1 Elliott 100,000 compressor.