

LANGLEY RESEARCH CENTER

FACILITY LOCATION Hampton, Virginia 23665
FACILITY NUMBER 582-A
FACILITY NAME Low-Turbulence Pressure Tunnel
FUNCTIONAL NAME Wind Tunnel, Low-Turbulence Pressure
TECHNOLOGICAL AREAS Investigation of the effects of the basic variables of shape, camber, and surface condition on complete models and on airfoil, flap, and control-surface characteristics

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|--------------|------------|-------------|------|-------------|--------|
| INITIAL COST | \$ 729 K | YR. BUILT | 1940 | STATUS CODE | Active |
| ACCUM. COST | \$ 1,010 K | NASA B.O.D. | 1940 | OWNER CODE | NASA |
| LIFE EXPECT. | Indef. | | | OPER. CODE | NASA |

CONTRACTOR NAME
(if contr. oper.)

POTENTIAL

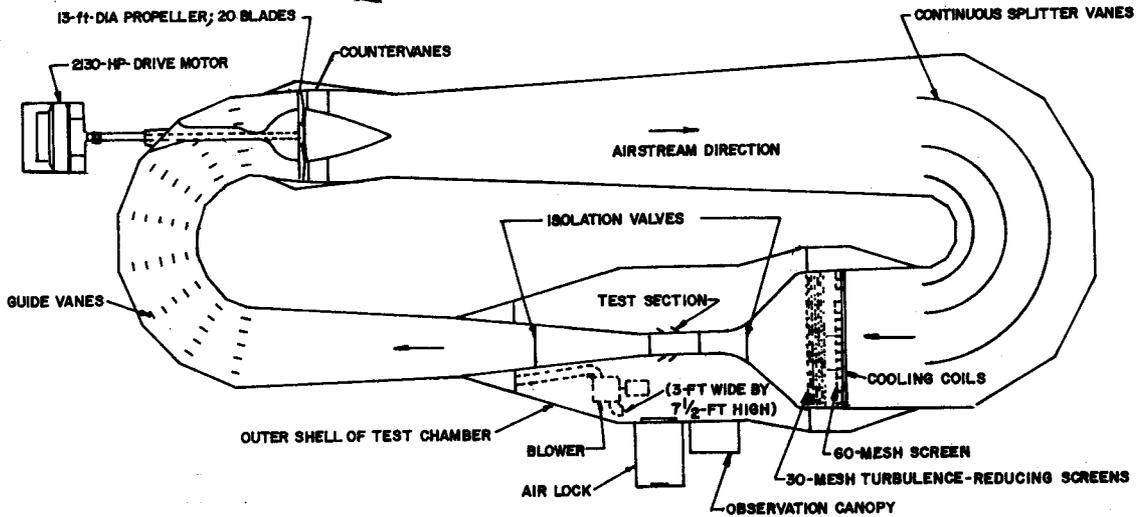
PLANS

OTHER INFO SOURCES The Langley Two-Dimensional Low-Turbulence Pressure Tunnel, NACA TN 1283, May, 1947

COGNIZANT ORG. High-Speed Aircraft Division
COMPONENT

LOCAL CONTACT FOR FURTHER INFO Chief, Research Facilities Engineering Division, Code 56.000; (804) 827-3171

January 1974



DESCRIPTION

The tunnel is a single-return, closed-throat-type. Air pressure may vary from 0.3 to 10 atm absolute, giving a wide range of air densities.

Two-dimensional test models usually completely span the 3-ft-wide test section. Chords of models range from 6 to 100 in. Three-dimensional test models usually have a 2-ft span.

CHARACTERISTICS

Mach Number: 0.10 to 0.40
 Stagnation Pressure, psia: 5 to 150
 Stagnation Temperature, °R: 520 to 560

Dynamic Pressure, lb/ft²: 23 to 785
 Reynolds Number, per ft: 0.6×10^6 to 15×10^6
 Running Time: Continuous