

Component Research Air Facility (CRAF)

		Description: The CRAF is used to provide simulated flight conditions for R&D programs in the turbine engine, advanced propulsion and fuel technology areas. It supports six research cells in Bldg 18C and 18E as well as the Compressor Research Facility. It has two DeLaval compressors, each supplying a maximum of 31 lbm/sec of air at 50 psia. The compressors can be operated in series to provide a maximum of 31 lbm/sec of air at 100 psia. It has three reciprocating compressors providing a total of 7.5 lbm/sec of air at 315 psia. It has two Centac compressors providing a total of 32 lbm/sec of air at 750 psia. The air from the reciprocating and Centac compressors can be heated in a process air heater to provide up to 31 lbm/sec of air at temperatures from 250oF to 1150oF. In addition, the Air Facility has four turbo-exhausters, each with an exhaust capability of 36,000 cfm at a minimum pressure of 11-inches mercury (25,000 ft altitude). The exhausters can be utilized together to obtain flow rates and pressures from 72,000 cfm at 4 inches mercury (45,000 ft altitude) to over 100,000 cfm at 11 inches mercury.
		

Purpose:

Provide simulated flight conditions for turbine engine, advanced propulsion and combustion technology programs. CRAF is required when R&D is conducted in the Supersonic Research facilities. Support the Component Calibration, Compressor Research and Turbine Aerothermal Basic research facilities.

Products:

Creation of the simulated flight conditions necessary for R&D programs in the turbine engine, advanced propulsion and combustion technology areas.

Availability:

Available to support U.S. Government agency use, DoD contractors and dual use/defense conversion use in conjunction with operations in the facilities described in the "Purpose".