

Avro Canada VZ-9V Avrocar

The Avrocar, with distinctive "flying saucer" shape, was designed as a VTOL aircraft for the American Department of Defence. At the time, the concept was considered a promising way to incorporate VTOL capability into high-speed design. Annular nozzles equipped with some rather ingenious flow control mechanisms intended to produce lifting thrust during cruise and control moments during all phases of flight.

The air for the annular jets was pumped by a centrally mounted 5 ft diameter turbo rotor driven by the exhaust of the 3 engines. In forward flight, the body of the Avrocar was intended to develop aerodynamic lift.

The Avrocar was designed to have a max speed of 300 mph at high altitudes and a range of 1,000 mi. 2 pilots sat in bubble-enclosed cockpits. The Avrocar was found to have a narrow flight envelope in tests at NASA Ames Research Center and in flight tests by the USAF. It was unstable and never operated at a height of over 4 ft. Work was abandoned on the concept due to limited flight success, existence of major mechanical problems caused by structural fatigue, and possible disenchantment over the potential of the unique flying saucer design.

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