

## Little Honda Goes Faster Faster



**HondaJet is an advanced light jet with revolutionary technology and design attributes that help it achieve far better fuel efficiency, more available cabin and luggage space, and higher cruise speed than conventional aircraft in its class.**

### HondaJet Innovation

A patented over-the-wing engine-mount (OTWEM) configuration was developed using advanced concepts in aerodynamics and design simulation. The OTWEM configuration eliminates the carry-through structure of conventional fuselage-mount designs, allowing for greater use of fuselage space for the cabin and cargo areas. The configuration is also expected to reduce cabin noise. Through optimization of the design and placement of the engine nacelles, the OTWEM configuration actually exhibits less drag at high speeds than conventional "clean wing" designs, contributing significantly to HondaJet's superior performance and fuel efficiency.

A natural-laminar flow (NLF) wing and NLF fuselage nose were developed through extensive analyzes and wind tunnel testing. These designs help achieve lower aerodynamic drag at high speeds together

with a high lift coefficient.

An advanced all-composite fuselage structure, consisting of a unique combination of honeycomb sandwich and stiffened panels structures joined using a patented integral co-curing process, reduces weight for optimal performance and payload capacity, while also reducing manufacturing complexity.

An advanced, all-glass cockpit utilizes the next generation of the Garmin G1000 avionics platform with features and capabilities unique to the HondaJet.

### Milestone Achievements

HondaJet was designed and developed by Honda engineers working in the US and Japan. Research work that led to the creation of HondaJet began in 1986. The jet was constructed by Honda R&D Americas in Greensboro, North Carolina, and all flight tests have been conducted in the US Honda Aircraft Company, Inc., headquartered in Greensboro, was established in October 2006 to oversee certification, production and sales of HondaJet. Major ground tests including structural proof tests, control-system proof test, system function tests and ground vibration tests were completed in December 2003. HondaJet made its first flight on Dec. 2, 2003. HondaJet has recorded more than 330 flight hours through September 2007. Application for FAA type-certification was made on October 11, 2006.

### BASIC DESIGN SPECIFICATIONS

Maximum Cruise Speed @ FL300 .....420KTAS  
Service Ceiling.....FL430  
Pressurization (Differential) .....8.7psi

### RANGE PERFORMANCE:

VFR Range (Maximum fuel with available payload - 644lbs) ..... 1400nm  
NBAA IFR Range (Cruise@FL410, Alternate 100nm, 45 minute reserve, 1 Pilot plus 3 Passengers) .....1180 nm  
Rate of Climb .....3990 ft/min

### AIRPORT PERFORMANCE:

Take-off Distance (distance required to climb to 35 feet above the runway plus a 15% factor).....3120 ft  
Landing Distance .....2500 ft

### ENGINES:

Manufacturer / Model .....GE HONDA / HF120 (x2)  
Output .....1880 lb/each (Max Take-Off)  
Bypass Ratio .....2.9

**EXTERNAL DIMENSIONS:** Height .....13.21 ft (4.03 m)  
Length .....41.70 ft (12.71 m)  
Span .....39.87 ft (12.15 m)

**CABIN DIMENSIONS:** Height .....4.94 ft (1.51 m)  
Length (fwd. pressure bulkhead to aft pressure bulkhead).....17.80 ft (5.43 m)  
Width .....5.00 ft (1.52 m)

**SEATING:** Typical .....2 crews + 5 passengers (or 1 crew + 6 passengers)  
Air taxi.....2 crews + 6 passengers

**BAGGAGE CAPACITY:** Nose Baggage .....9 cubic feet.  
Aft Baggage .....57 cubic feet

**1986** Honda begins research in Japan on both small aircraft and jet engines.

**1993** Honda begins research on composite body aircraft with Mississippi State University (MSU), leading to development of aircraft called "MH-02" that is jointly fabricated and tested by Honda and MSU. Research continues until 1996.

**1995** Honda begins high altitude testing of its first generation turbofan engine, HFX-01, conducting more than 70 hours of tests through 1996.

**1999** Development begins of the HF118 turbofan jet engine in the 1,000 to 3,500-pound thrust class, featuring a compact, lightweight, and fuel-efficient design.

**2000** Honda R&D Americas establishes a research facility at Piedmont Triad International Airport in North Carolina in October 2000 for the purpose of researching, fabricating and flight testing of HondaJet.

**2002** Honda conducts high altitude tests of the HF118 engine starting in June 2002. Honda publishes and reports its first technical paper in June 2002 concerning technological achievements of the new airframe. Honda continues publishing technical papers, with the most recent paper in June 2005.

**2003** HondaJet takes first test flight, December 3, 2003. Honda makes first public announcement of the achievement days later.

**2004** Honda and GE Aviation announce February 16, 2004, an alliance to commercialize the HF 118 engine, and establish a joint venture, GE-Honda Aero Engines, LLC, in October 2004, to pursue the development, production and sales of Honda's HF118 turbofan engine in the light business jet market.

• In July 2004, Honda establishes Honda Aero, Inc. to manage its aircraft engine business in the US and the Wako Nishi R&D Center in Japan to research and develop turbofan jet and piston aviation engines.

**2005** HondaJet makes its public "world debut" at the EAA (Experimental Aircraft Association) AirVenture 2005 in Oshkosh, Wisconsin, July 28, 2005.

**2006** Honda announces that it will commercialize HondaJet at the EAA AirVenture 2006 in Oshkosh, Wisconsin, July 25, 2006.

• Honda Aircraft Company, Inc. (HACI) established in August 2006, responsible for Honda's overall airframe business strategy, and the further development, sales promotion and production of the innovative HondaJet.

• Honda Aircraft Company, Inc. begins sales of HondaJet at the NBAA (National Business Aviation Association) annual convention in Orlando, Florida, on October 17. HondaJet will be powered by the HF120 turbofan engine. HondaJet is targeted for type certification in 3-4 years with production in the U.S. beginning 2010.

**2007** Honda Aircraft Company announces location of its \$100 million world headquarters and production facility at Piedmont Triad International (PTI) Airport in Greensboro, North Carolina, Feb. 9, 2007.

• Honda Aircraft Company breaks ground for new headquarters and production facility, June 27, 2007. Construction of the 219,000 sq. ft. offices and airplane hanger is scheduled for completion in Spring 2008. The remaining 150,000 sq. ft. production facility is expected to be completed by Fall 2009.

• Honda Aero announced plans, July 17, 2007, to establish its headquarters and jet engine manufacturing facility in Burlington, North Carolina, beginning with production of the GE Honda HF120 turbofan engine in 2010.

• Honda Aero conducted an official groundbreaking ceremony, November 28, 2007, for its new headquarters and engine manufacturing facility in Burlington, North Carolina, near the Burlington Alamance County regional airport.