AW609: Tiltrotor Technology for Business Aviation

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Bill Sunick, Leonardo Helicopters
AW609 Flight Envelope Advantage

Tiltrotor technology enables true fixed wing cruise speeds and altitudes with VTOL performance.

**AW609 TiltRotor**
- Altitude: 25,000 ft
- Speed: 275 kts
- Range: 700 nm (std tank)
- Pressurised cabin
- Full Icing

**Typical Helicopter**
- Altitude: 10,000 ft
- Speed: 140 kts
- Range: 360 nm

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<table>
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<tr>
<th>Altitude ft</th>
<th>0</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
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<td>Speed (kts)</td>
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FW Turboprop

Tiltrotor

Compound

Cabin Pressurization Required

Helicopter
Design Features

Airframe
- Primarily Composite
- Pressurized Cabin
- Vapor Cycle Air Conditioning
- Rudderless

Power Plant
- 2 PWC PT6C-67A
- AEO Takeoff Power: 1,940 SHP
- OEI Power: 2,492 SHP, 30 sec

Hydraulic & Electrical
- Triplex 3,000 psi Hydraulics
- 3 DC Generators & 28Ah Battery
- 2 PMGs & 2 FCC Batteries
- 2 AC Generators

Rotor/Drive Systems
- Mechanically Interconnect Prop-Rotors
- Conversion via Dual Telescopic Ballscrews

Avionics/Flight Controls
- FCS Triplex Digital Full Authority FBW
- Rockwell Collins Fusion Avionics

Ice Protection
- Rotor Anti-ice/De-ice
- Wing & Engine Inlet De-ice Boots
- Heated Windshield

Fuel System
- 2,571 lbs in 10 Crashworthy Fuel Cells
- Aux External Tanks (~900lb)
Performance

- MTOW: 18,000 lbs/8,000 kg
- Max Useful Load: 6,300 lbs/2,860 kg
- Accommodation: 2 crew & 9 pax
- Max Cruise Speed: 275 kts
- HOGE ISA: 6,000 ft
- HIGE ISA: 10,000 ft
- Ceiling: 25,000 ft
- Max Range (dry tank): 700nm (approx 1,000nm w/ aux fuel)
VIP/Corporate Configuration

*Point to point transit in pressurized comfort above the weather.*
Range from NYC Heliport

Corporate Range
Transport Cat VTO
Standard Day
30min reserve

Manhattan to Downtown Chicago in under 3 hrs!
Configurations

VIP

Offshore

SAR/EMS
AW139 Comparison

AW609 is approximately 10% larger than AW139; Smaller than S-92
Size Comparison

Spotting factor within 10% between S-92/AW189 and AW609