

CENTRE FOR JOINT WARFARE STUDIES



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CHINESE AIRCRAFT WIND TUNNEL AND AMPHIBIOUS AIRCRAFT AG-600

China's Latest Aircraft Wind Tunnel Completes Major Test

1. The Aerodynamics Research Institute under the Aviation Industry Corporation of China (AVIC) conducted a test run on the main compressor of the FL-62 wind tunnel at maximum speed on 01 Apr 2020. During the test, the Mach number at the wind tunnel's core flow indicated that its trans-sonic flow field control accuracy had reached an internationally advanced standard. The test will provide support to future wind tunnel calibrations. Weighing 6,620 tons, the 17,000-cubic-meter FL-62 is the China's first-ever large continuous trans-sonic wind tunnel; and as the core component of the FL-62 wind tunnel, the six-meter class axial compressor is also the first of its kind in China.

2. **Comments.** China's under-development wind tunnel project is expected to determine the shape of China's future fighter jets and serve as a backbone for the development of hypersonic vehicles. AVIC statement called it as a 'pillar of great power' and a fundamental and strategic facility crucial to China's aviation industry. Wind tunnels are used to simulate airflow around aircraft models before a real aircraft is used for actual flight test. The simulation results help shape and improve an aircraft's aerodynamic design and stealth capabilities, thereby significantly reducing their development periods. Unlike the unstable and inconsistent airflow of previous Chinese wind tunnels, the FL-62 provides a stable wind field and more precise measurements.

Source: <https://www.globaltimes.cn/content/1185409.shtml>

Amphibious AG-600 Aircraft Plans Sea-Based Tests.

3. The AG-600, China's large amphibious aircraft is preparing to conduct its first maritime test flight in Hubei Province sometime this year. The AG-600 aircraft is undergoing design optimisation and adjustment. The aircraft is ready to start test flight training, and is scheduled to make its maiden flight at sea this year. About the size of a Boeing 737, AG-600 aircraft is 37 m long and has a wingspan of 38.8 m. During the flight itself, it can scoop up and collect 12 tons of water in 20 seconds and transport up to 37 tons of water. The AG-600 can fight forest fires, undertake water rescues, monitor the maritime environment and carry out patrol missions.

4. **Comments.** The AG-600 conducted its land-based maiden flight in Zhuhai, Guangdong Province, in Dec 2017 and its first water-based test flight over a reservoir in Jingmen in Oct 2018. Sea-based test flights are more challenging than those conducted over land, lakes or rivers because of complexity of sea conditions and corrosive ocean environment. The sea-based test flight will be another milestone in the aircraft's development. The amphibious aircraft is expected to be delivered for operational usage by 2022. When deployed from Sanya in Hainan Province, the AG-600 can reach any location in the South China Sea, due to its endurance of 12 hours and ability to take off and land on water.



Source: <https://www.globaltimes.cn/content/1184914.shtml>