



The Future of the PLA Navy's Shipborne Helicopter Force



PLAAF Changhe WZ-10.

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OE Watch Commentary: China's *Shipborne Weapons* journal recently featured a multi-part series discussing China's ongoing program to develop a dedicated helicopter carrier, the Type 075. The first part of the series featured an analysis of the various pros and cons of other amphibious assault ships. The accompanying passage is from a subsequent part of the same discussion and hones in on the question of which indigenously produced attack and transport helicopters are best suited for the Chinese navy's needs.

Currently, China's helicopters aboard its transports and surface combatants are limited in niche anti-submarine warfare (ASW) and transport roles. China's navy needs a dedicated shipborne helicopter force to provide direct fires and transport capabilities in support of amphibious operations. Building several Type 075 helicopter carriers similar to US landing helicopter docks (LHD) would allow a full complement of helicopters in both attack and transport roles.

China's geography naturally lends itself to helicopters, but technological bottlenecks in engine design, composite materials for lightweight airframes had slowed China's ability to produce capable rotor-wing aircraft indigenously. The Chinese military has seen a marked increase in its use of helicopters of all types. While they were previously mostly concentrated in the Army, the Navy and Air Force have gradually adopted more helicopters including attack variants.

Over the past decade, the number of Army aviation regiments were expanded and later enlarged to a brigade. Each Group Army now boasts an Army Aviation brigade. The PLA Navy's complement of shipborne helicopters has also expanded as more decks became available for them to operate off of. The PLA Navy has also experimented with arming Z-9Cs, a small transport helicopter, with light torpedoes and anti-ship cruise missiles.

Lacking dedicated ground attack aircraft, the PLA as a whole has a requirement for direct fire support. As a result, China has produced two dedicated attack helicopters—the Z-10 and Z-19. While the former can carry a larger loadout, the latter is likely confined to armed scouting roles. Both helicopters have Z-10s and are now regularly shown carrying additional fuel for long-distance operations in support of amphibious assaults.

The PLA relies mostly on a mix of Z-9, Z-9, and Mi-17 transport helicopters. The Z-9 and Z-8 are indigenized copies of French designs. The former is a light helicopter and the latter a heavier design. Modernized versions of the Z-8 including a navalized "G" variant and a wide body version are both discussed in the article for their potential suitability for PLA Navy amphibious ships.

The article concludes that for the new Type 075, a complement of 10 Z-10s and 20 wide-body variant Z-8s provide the best mix of offense and transport capabilities for the Chinese Navy. (Also see: "New Class of Amphibious Assault Ship Will Expand PLA Navy Operational Capability" in this issue of *OE Watch*.) **End OE Watch Commentary (Wood)**

“Judging from the progress of China's amphibious assault ships and development of relevant helicopters, the seven-ton Z-10, and 15-ton Z-8 wide-body class helicopters should be chosen to best meet operational requirements.”

Source: “中国海军两栖攻击舰载机的选型 (Selection of the PLA Navy's Amphibious Assault Ship Shipborne Aircraft),” *Shipborne Weapons* [舰载武器] No. 307. February 2019. pp. 19-34.

...China can currently mass produce two advanced armed helicopters, namely the six-ton class Z-10 (Thunderbolt) and the four-ton Z-19 (Black Whirlwind). Together they are the main force of Chinese Army Aviation.

Between the Z-10 and Z-19, which is more in line with the operational requirements of amphibious assault ships? Obviously, the future amphibious assault ship cannot equip two helicopter types with similar capabilities, so which should it choose?...

From the perspective of firepower, advanced technology, operational capability and potential for improvement, between the two attack helicopters, the Z-10 is overall the most reasonable to develop into a shipborne variant. Helicopters on long-term deployment aboard amphibious assault ships and carrier aircraft both face additional challenges. (Facing conditions at sea, the airframes require anti-corrosion, -humidity, and -salt measures...)....

The number and capability of transport helicopters carried by amphibious assault ships are even more important than gunships. After all, these helicopters are responsible for vertical landing capability air transport capability during amphibious operations....

Judging from the progress of China's amphibious assault ships and development of relevant helicopters, the seven-ton Z-10 and 15-ton Z-8 wide-body class helicopters should be chosen to best meet operational requirements. This provides the most practical balance of time, technology, performance and cost. Of course, subject to operational needs the ship could also carry a small number of Z-18 early warning helicopters or antisubmarine warfare helicopters.

If the Chinese Navy's 30,000-ton amphibious assault ship has enough room for 10 Z-10s and 20 Z-8 wide-body helicopters, then its airborne fire support and material transport capacity will be very considerable. The transport capacity, for example, would be on par with U.S. Wasp-class LHD's MV-22 and CH-53K 50 percent and could satisfy the requirements of three-dimensional landing operations [立体登陆作战].