**Type 093 Submarine**

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| Profile of the Type 093 | |
| **Class overview** | |
| Name: | Type 093 |
| Builders: | [China Shipbuilding Industry Corporation](https://en.wikipedia.org/wiki/China_Shipbuilding_Industry_Corporation) [Bohai Shipyard](https://en.wikipedia.org/wiki/Bohai_Shipyard), [Huludao](https://en.wikipedia.org/wiki/Huludao) |
| Operators: | [People's Liberation Army Navy](https://en.wikipedia.org/wiki/People%27s_Liberation_Army_Navy) |
| Preceded by: | [Type 091](https://en.wikipedia.org/wiki/Type_091_submarine) |
| Succeeded by: | [Type 095](https://en.wikipedia.org/wiki/Type_095_submarine) |
| In commission: | 2006-present |
| Building: | 1 (est.) as of January 2014[[update]](https://en.wikipedia.org/w/index.php?title=Type_093_submarine&action=edit) |
| Completed: | 5 |
| Active: | 2 |
| **General characteristics** | |
| Type: | SSN |
| Displacement: | 7,000 tons (submerged) |
| Length: | 110 m |
| Beam: | 11 m |
| Draft: | 7.5 m |
| Propulsion: | Pressurized water nuclear reactor |
| Speed: | 30 [kn](https://en.wikipedia.org/wiki/Knot_(unit)) |
| Range: | Unlimited |
| Armament: | * 6 × 553 mm or 650 mm torpedo tubes * [VLS](https://en.wikipedia.org/wiki/Vertical_launching_system) tubes   + [YJ-18](https://en.wikipedia.org/wiki/YJ-18)   + [CJ-10](https://en.wikipedia.org/wiki/CJ-10) (Type 093G) |

The **Type 093** ([Chinese](https://en.wikipedia.org/wiki/Chinese_language): 093型核潜艇; Chinese designation: **09-III**; [NATO reporting name](https://en.wikipedia.org/wiki/NATO_reporting_name): [***Shang***](https://en.wikipedia.org/wiki/Shang_Dynasty)**-class**) is a class of [nuclear-powered](https://en.wikipedia.org/wiki/Nuclear_submarine) [attack submarines](https://en.wikipedia.org/wiki/Attack_submarine) deployed by the Chinese [People's Liberation Army Navy Submarine Force](https://en.wikipedia.org/wiki/People%27s_Liberation_Army_Navy_Submarine_Force). The improved **Type 093G** (reported as **Type 093A** by Western analysts) is longer than the Type 093. The 093G is now confirmed having a [vertical launching system](https://en.wikipedia.org/wiki/Vertical_launching_system) (VLS) for [YJ-18](https://en.wikipedia.org/wiki/YJ-18) supersonic [anti-ship missiles](https://en.wikipedia.org/wiki/Anti-ship_missile), and anti-ship variants of the [CJ-10](https://en.wikipedia.org/wiki/CJ-10) cruise missile.

They are constructed at the Bohai Shipyard in [Huludao](https://en.wikipedia.org/wiki/Huludao). These boats are expected to replace the older [Type 091 submarines](https://en.wikipedia.org/wiki/Type_091_submarine).

**Background**

Global Security.org reports that development of the Type 093 began in the early 1980s. However, Admiral [Liu Huaqing](https://en.wikipedia.org/wiki/Liu_Huaqing) wrote in his memoirs that development began in 1994; this followed President [Jiang Zemin](https://en.wikipedia.org/wiki/Jiang_Zemin)'s continued support for nuclear submarine development after the launch of the final Type 091 in 1990. Erickson and Goldstein suggest that the [Yinhe incident](https://en.wikipedia.org/wiki/Yinhe_incident) in 1993, and continued tensions with Taiwan, also drove approval of the program.

Two Type 093s were launched in 2002 and 2003 respectively.

In 2013, it was understood that four Type 093Gs were at various stages of construction, including one which had already been launched 2012. In December 2014, Chinese media reported that two may have been completed. In May 2015, Chinese media reported three were completed and awaiting delivery.

Analysts speculate that no further Type 093s will be built due to the development of the [Type 095 submarine](https://en.wikipedia.org/wiki/Type_095_submarine).

**Characteristics**

The Type 093 is estimated to be roughly 7,000 [t](https://en.wikipedia.org/wiki/Ton) displacement when submerged, 110 meters (360 ft) long with a beam of 11 m. Commercial imagery suggests the Type 093G is longer. The sonar suite includes H/SQC-207 flank-mounted sonar. The boat may also use a seven-blade [asymmetric propeller](https://en.wikipedia.org/wiki/Skewback_propeller).

The powerplant is speculated to be two [pressurized water reactors](https://en.wikipedia.org/wiki/Pressurized_water_reactor). In 2002, Chinese sources claimed the Type 093 was powered by a high-temperature gas-cooled reactor, but the immaturity of the technology makes this unlikely.

The Type 093 is armed with six torpedo tubes; reports conflict on whether these are 553 mm or - as claimed by Chinese sources in 2002 – 650 mm tubes. The Type 093 has been claimed to be armed with the [YJ-12](https://en.wikipedia.org/wiki/YJ-12) or [YJ-82](https://en.wikipedia.org/wiki/YJ-82) anti-ship missiles. Anti-ship cruise missiles may also be future options.

Chinese sources claim the Type 093G includes a [vertical launching system](https://en.wikipedia.org/wiki/Vertical_launching_system) for [YJ-18](https://en.wikipedia.org/wiki/YJ-18) anti-ship missiles, and a longer teardrop hull with a "wing-shaped cross-section" for improved speed and stealth. Rear Admiral [Yin Zhuo](https://en.wikipedia.org/wiki/Yin_Zhuo) claims the Type 093G may carry 12 anti-ship variants of the [CJ-10](https://en.wikipedia.org/wiki/CJ-10) cruise missile.

**Noise**

In 2002, Chinese sources claimed the Type 093's noise level was on par with the [improved Los Angeles-class](https://en.wikipedia.org/wiki/Los_Angeles-class_submarine). In 2004, Chinese sources claimed the Type 093 was on par with [Project 971](https://en.wikipedia.org/wiki/Project_971) ([NATO reporting name](https://en.wikipedia.org/wiki/NATO_reporting_name) *Akula*), at 110 [decibels](https://en.wikipedia.org/wiki/Decibel). In 2009, USN ONI listed the Type 093 as being noisier than [Project 671RTM](https://en.wikipedia.org/wiki/Project_671) (NATO reporting name *Victor III*) which entered service in 1979.

Chinese media claims the Type 093G is quieter than the shorter Type 093 due to an altered hull form.

**See also**

* [Type 094 submarine](https://en.wikipedia.org/wiki/Type_094_submarine) - a Chinese SSBN class

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