



## Pakistan's Nuclear Inventory

Pakistan tested its first nuclear weapon in [1998](#), becoming the world's 7th state to officially test a nuclear weapon. The exact yields of the weapons in the country's current arsenal are not known, but general [estimates](#) are between 5-12 kilotons (kt) for most weapons, with some longer-range ballistic missiles possibly reaching 40 kt. Pakistan's [declared](#) strategic nuclear policy claims to avoid conflict through "[full spectrum deterrence](#)," while maintaining minimum credible deterrence against India's nuclear and superior conventional forces. Pakistan has adopted a [position](#) of "[no first use](#)" against non-nuclear weapon states. Similar to India, Pakistan is not a signatory of the Nuclear Non-Proliferation Treaty (NPT). However, both countries are party to a bilateral non-aggression agreement regarding their respective nuclear facilities.

### How Many?

Pakistan is believed to have a stockpile [of approximately 170](#) warheads, making it the 6th largest nuclear arsenal.

Pakistan has been working toward a sea-based deterrent, and has successfully tested a nuclear-capable submarine-launched cruise missile from a submerged platform [twice](#), once in January 2017, and again in March 2018. Once this missile is fully developed and tested on-board a submarine, Pakistan will have a nuclear triad, with air, sea and land capabilities.

### Air

The F-16 combat aircraft, along with some Mirage III and V aircraft, are believed to be dual-capable (capable of both conventional and nuclear strikes) and [constitute](#) the air component of Pakistan's nuclear force. Pakistan has [approximately](#) 36 warheads for the air branch. The F-16 A/B and newer C/Ds, if equipped, would likely carry a [single](#) nuclear warhead.

There are estimated to be approximately 12 Mirage III/V aircraft, with a range of 2,100 km. Upgrades to the Mirage fleet provide them with the capability for in-air refueling. A new ALCM, the [Ra'ad](#), has a range of 350+ km and has been successfully tested on the Mirage III. The Mirage fleet is slated for replacement by Chinese-sourced [JF-17](#) aircraft, although the timeline is unclear.

### Sea

The Babur-3, a sea-launched version of the ground-launched nuclear-capable Babur-2, has been tested underwater twice. However, because the weapon remains in development, Pakistan is not yet considered to have a sea-based deterrent. In late 2021, Pakistan approved the purchase 8 new missile-capable [submarines](#) from China, on which experts believe the Babur-3 might eventually be deployed.

### Land

Pakistan has 6 operational types of nuclear-capable ballistic missiles. Its overall arsenal consists primarily of short to medium-range ballistic missiles but is making significant progress in its cruise missile capabilities. The ground arsenal consists of approximately 106 land-based missiles with yields of 5-40 kt. Pakistan's road-mobile ballistic missiles include the short-range [Abdali](#), [Ghaznavi](#), [Shaheen-1](#) and [NASR](#), as well as the medium-range [Shaheen-2](#) and [Ghauri](#). The Shaheen-3 and the [Ababeel](#) medium-range ballistic missile (MRBM) are currently in development. The Ababeel is believed to have multiple independently targetable reentry vehicle (MIRV) designs but has not yet tested this capability. Experts have expressed [doubts](#) that Pakistan has successfully miniaturized a nuclear warhead, a necessary step for MIRV operation.

Pakistan's development of non-strategic nuclear weapons has been criticized as destabilizing for potentially lowering the nuclear-use threshold. Pakistan has developed the [NASR](#) (Hatf-9) short-range ballistic missile, which, with a range of just 60-70 km, cannot hit strategic targets in India. In February 2021, Pakistan [tested](#) a short-range ballistic missile, capable of carrying a nuclear or conventional warhead over 289 kilometers (180 miles).

*Sources: Federation of American Scientists, Congressional Research Service, CSIS Missile Defense Project, Carnegie Endowment for International Peace and Reuters*