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 165 warheads, making it the 6th largest nuclear arsenal. Pakistan is actively developing nuclear weapons, and experts project that it may have the 5th largest arsenal by 2025 with around 200 warheads. 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

Russia’s 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).