

CENTRE FOR JOINT WARFARE STUDIES



CENJOWS

CHINA'S HYPERSONIC CAPABILITIES

China is officially known to be equipped with two lethal hypersonic missiles:-

- **Dong Feng-17 (DF-17)**. It is a medium-range missile or MRBM system equipped with an HGV. It is capable of carrying conventional or nuclear weapons and has a reported speed of Mach 5-10. With a range of 1,800-2,500km and a launch weight of 15,000kgs, the DF-17 is a nightmare for all adversaries. However, this missile's status remains unclear, although its appearance in China's October 2019 military parade has raised speculation that it may have entered PLA service.
- **DF-ZF HGV**. It can travel at speeds between Mach 5-10. It is apparently capable of performing "extreme maneuvers" to evade enemy defenses. The DF-17 was created to work in tandem with the DF-ZF, exponentially enhancing the capabilities of both weapons by a factor of ten.

Sometime around late July-early August this year, China tested a nuclear-capable hypersonic glide vehicle that went around the globe before it sped towards a target. The hypersonic missile test included the launch of a separate missile from the ultra-high-speed vehicle. The hypersonic missile, which can be guided unlike ballistic missiles, missed the target by more than 20 miles (32 kilometers), which according to top US military official, General John Hyten, was "near enough" for a first test. The release took place while the vehicle was traveling at hypersonic speeds, exceeding 3,835 mph (6,175 km/h). The latest reports have revealed that while flying from the south toward China, the hypersonic vehicle launched a separate missile that rocketed away and landed safely in the South China Sea.

This is the first time ever that any country has ever achieved this feat which required firing a missile from a parent vehicle with a speed of Mach 5. Neither the United States nor Russia, two countries with the most advanced military capability and technology have demonstrated this capability yet.

China's test does not mean an immediate deployment but it has caught its rival unawares and has the potential to trigger a more comprehensive arms race.

<https://eurasianimes.com/chinas-missile-program-far-exceeds-the-capability-demonstrated-by-us-russia-so-far-us-intelligence-report/>
https://www.scmp.com/news/world/united-states-canada/article/3157006/chinese-hypersonic-test-included-path-breaking?module=perpetual_scroll&pgtype=article&campaign=3157006

China is developing a heat-seeking hypersonic weapon that will be able to hit a moving car at five times the speed of sound, according to scientists involved in the project.

The research team, led by Yang Xiaogang from the PLA Rocket Force University of Engineering in Xian, said “important progress” had been made towards solving the main problem of how to pinpoint a moving target at extreme speeds.

Yang and his colleagues from the university's College of Missile Engineering have been given a deadline of 2025 to come up with solutions to the seemingly intractable challenges of hypersonic technology.

<https://www.scmp.com/news/china/military/article/3177908/chinese-scientists-work-hypersonic-missile-can-hit-moving-car>



The DF-17 HGV-equipped medium-range missile

Other nations are chasing the trio of leaders—or teaming up with them. Australia is collaborating with the United States on a Mach 8 HGV, and India with Russia on a Mach 7 HCM. France intends to field an HCM by 2022, and Japan is aiming for an HGV in 2026, the U.S. Congressional Research Service (CRS) noted in a July 2019 report.

<https://www.science.org/content/article/national-pride-stake-russia-china-united-states-race-build-hypersonic-weapons>