

CENTRE FOR JOINT WARFARE STUDIES



CENJOWS

CHINESE MISSILE TECHNOLOGY – DF 41

1. **DF-41(Dong Feng-41 / CSS-X-20).** The DF-41 (Dong Feng-41, CSS-X-20) is a road- and rail-mobile intercontinental ballistic missile (ICBM). It is estimated to have an operational range of 12,000 to 15,000 km, which would make it the longest-range missile in operation. It will likely have a top speed of Mach 25 and will be capable of delivering upto 10 MIRVed warheads. It is projected to be able to strike the continental United States within 30 minutes.
2. Despite decades of speculation, the existence of this program was only revealed in August 2014. It underwent its seventh flight test in April 2016 and is likely at the end of its testing phase and will be set for deployment in Xinyang, China with the PLA Rocket Forces. In November 2017, just two days before U.S. President Trump's visit to China, the DF-41 was tested in the Gobi desert.
3. **On October 1, 2019, China on its 70th Anniversary Displayed the Missiles in a Large Military Parade.** The Dong Feng 41 is believed to be approximately 21.0 m in length, 2.25 m in diameter, and 80,000 kg in weight. Its payload probably carries either a single warhead or up to 10 MIRV with a total weight of 2,500 kg. Its warheads can be single 1 MT nuclear warhead or a selectable yield of 20, 90 or 150 kT on each MIRV. It uses inertial guidance, likely with stellar updates and a Global Positioning Satellite (GPS) system, which gives it an accuracy of 100-500 m CEP. The DF-41 uses a three-stage solid propellant engine.
4. Initial development is expected to produce 10 to 20 missiles with the possibility of greater numbers in the future. About half of those produced would likely be kept mobile via rail or road-based launchers while the other half likely deployed in silos. The DF-41 is set to replace the DF-5 (CSS-4), but both will probably be kept operational to bolster PRC nuclear force numbers.

DF-41 at a Glance.

Originated From	:	People's Republic of China (PRC)
Possessed By	:	People's Republic of China (PRC)
Alternate Names	:	Dong Feng-41, CSS-X-20
Class	:	Intercontinental Ballistic Missile (ICBM)
Basing	:	Road/rail-mobile, silo-based
Length	:	21.0 m
Diameter	:	2.25 m
Launch Weight	:	80000 kg
Payload	:	2500 kg
Warhead	:	Single 1 MT or up to 10 MIRV with 20/90/150 kT warhead
Propulsion	:	Three-stage solid propellant
Range	:	12,000-15,000 km
Status	:	Development

(Source: Missile Defense Project, "DF-41 (Dong Feng-41 / CSS-X-20)," Missile Threat, Center for Strategic and International Studies, August 12, 2016, last modified October 8, 2019, <https://missilethreat.csis.org/missile/df-41/>.)