

# Israeli nuclear weapons capability

## [Overview]

As of April 2017, Israel is estimated to possess a total of 80 nuclear warheads (**Kristensen, Hans M. & Korda, Matt 2019**). As of late 2014, Israel has around 300 kg of high enriched uranium (HEU) and approximately 860 kg of weapons-grade plutonium (**IPFM 2016**). To manufacture a nuclear bomb, depending on technical levels and other factors, it requires 12-18kg of HEU or 4-6kg of plutonium. Accordingly, Israel possesses nuclear fissile material equivalent to 159-240 warheads. With higher levels of technical sophistication, however, it is possible to obtain a bomb from 2-4kg plutonium, in which case the same Israeli stockpile would suggest an arsenal of 232-455 warheads (**Union of Concerned Scientists 2004**). Kristensen and Norris suggest that Israel has not converted all its fissile material into nuclear warheads, and estimate the number of warheads in conjunction with the intelligence on their nuclear weapons delivery capabilities (**Kristensen, Hans M. & Norris, Robert S. 2014**).

Israel maintains its 'ambiguity policy', neither confirming nor denying that it has nuclear weapons. It is said that Israel and South Africa tested a nuclear bomb in the air over the southernmost part of the Indian Ocean on September 22, 1979. On December 6, 2013, Avraham Burg, ex-Speaker of the Knesset, delivered a speech in which he acknowledged Israel's possession of nuclear and chemical weapons (**The Times of Israel 2013**).

It is thought that Israel, as India and Pakistan do, separately maintain their nuclear warheads and ground-launched missiles. It is possible that nuclear warheads are carried by submarines operating outside Israeli waters (**McDonnell 2013**). Refer to Note 2.

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## ● Nuclear warheads 80

## ● Nuclear weapons delivery vehicles <sup>1), 2)</sup>

Type / designation	no. of nuclear warheads	Range (km)	Payloads (kg)	Year first deployed	Remarks
Ground-launched ballistic missile		<b>50</b>			
Jericho 2	25	1,500–1,800	750–1,000	1990	3)
Jericho 3	25	< 4,000	1,000–1,300	In development	4)
Airborne bomb <sup>5)</sup>		<b>30</b>			
F16A/B/C/D/I	30	1,600	5,400	1980	6)

## [Notes]

- 1) The source for information on no. of nuclear warheads, delivery range , payloads and year first deployed is (**Kile, Shannon N. & Kristensen, Hans M. 2018**).
- 2) Israel is set to deploy six German-made Dolphin-class attack submarines. Five have already been turned over to Israel, and the sixth will be delivered by late 2019 (**Kile, Shannon N. & Kristensen, Hans M. 2018**). Various reports (**Spiegel Online 2012, among others**) have it that Israel has nuclear cruise missiles aboard these submarines in deployment, but Israeli and German officials have denied this allegation (**Kile, Shannon N. & Kristensen, Hans M., 2018**). In October 2017, the German government announced that it has a contract to replace three old submarines it delivered in the 1990s with three new ones (**Kile, Shannon N. & Kristensen, Hans M. 2018; The Times of Israel 2017**).
- 3) Solid-propellant. Two-stage. Road-Mobile (**Missile Threat 2018**). Expected to be replaced in phases by the Jericho 3 variant through 2026 (**Missile Threat 2018**).
- 4) Solid-propellant. Three-stage. Road – & Rail-Mobile (**Missile Threat 2018**). Test launch seemed to be conducted on July 12, 2013 (**Schell, Phillip Paton & Kristensen, Hans M. 2014**).
- 5) It is believed that part of the 25 F15 Strike Eagle aircrafts (called Lahm in Israel) carry out nuclear missions (**Schell, Phillip Paton & Kristensen, Hans M. 2014**).
- 6) It is believed that part of the 205 aircraft carry out nuclear missions (**Schell, Phillip Paton & Kristensen, Hans M. 2014**).

## [Source]

**IPFM (International Panel on Fissile Materials) 2018**: "Countries Israel," <http://fissilematerials.org/countries/israel.html> (accessed April 16, 2019)

**Kile, Shannon N. & Kristensen, Hans M. 2018**: Israeli nuclear forces," SIPRI Yearbook 2018 Armaments, Disarmament and International Security, Oxford University Press 2018, pp.278-279.

**Kristensen, Hans M. & Korda, Matt 2019**: "Status of World Nuclear Forces," Federation of American Scientists. <http://fas.org/issues/nuclear-weapons/status-world-nuclear-forces/> (accessed May 8, 2019)

**Missile Threat 2018**: "Jericho 3,"<https://missilethreat.csis.org/missile/jericho-3/> (accessed April 16, 2019)

**Schell, Phillip Paton & Kristensen, Hans M. 2014**: "Israeli nuclear forces," SIPRI Yearbook 2014 Armaments, Disarmament and International Security, Oxford University Press, July 2014. pp.333-334.

**Spiegel Online 2012**: "Secret Cooperation: Israel Deploys Nuclear Weapons on German-Built Submarines," 3 June 2012. <http://www.spiegel.de/international/world/israel-deploys-nuclear-weapons-on-german-submarines-a-836671.html> (accessed June 6, 2019)

**The Times of Israel 2017**: "Germany okays deal to sell nuke-capable submarines to Israel," 30 June 2017. <https://www.timesofisrael.com/germany-okayes-deal-to-sell-uke-capable-submarines-to-israel/> (accessed June 6, 2019)

**Union of Concerned Scientists 2004**: "Weapon Materials Basics (2009)," <http://www.ucsusa.org/nuclear-weapons/nuclear-terrorism/fissile-materials-basics#.WUTTEIFpyM8> (accessed June 6, 2019)