

Russian nuclear weapons capability

[Overview]

Compared with the U.S. French, and UK nuclear capabilities, Russian capabilities are quite vague. As for the data pertaining to the U.S.-Russia New START Treaty, Russia, unlike the U.S., has not disclosed any breakdown of the number of (deployed/non-deployed) launchers. On March 1, 2019, Russia announced that it possessed a total 524 strategic delivery vehicles and 1,461 deployed strategic nuclear warheads (**U.S. Department of State 2019**). This chart and the New START Treaty data can be reconciled by replacing the 200 warheads counted under "Strategic bomber payloads" with the estimated number of operational strategic bombers (50) to reduce the number of strategic delivery vehicles and deployed warheads to 512 and 1,432, respectively. Given Russia's limited transparency and day-to-day fluctuations in deployments in reality, this is probably a reasonable estimate.

Also, Russia has approximately 160 ballistic missiles on high alert (capable of launch in 15 minutes), and most of them are estimated to be ICBMs (**Kristensen, Hans M. 2017**). After 2008, 96% of deployed ICBMs are said to be on high alert (**Podvig, Pavel 2014**).

Russia is in the process of systematically replacing Soviet-era SS-18, -19, and -25 systems with the latest SS-27M2 systems with complete replacement by 2020. SS-18s are likewise being replaced by SS-X-30 Sarmats under development. Strategic nuclear submarines and SLBMs will also be replaced by the latest Borei-class submarines and new SLBM Bulava. Elsewhere, Russia's bombers, cruise missiles and non-strategic nuclear weapons and their launchers are all being modernized.

As a matter of fact, maritime patrols by Russia's nuclear submarines have gained in frequency in the recent years. However, this Russian fleet comprises about a total 20 submarines per year. Given constraints on submarine patrols, they are believed to be attack nuclear submarines (**Kristensen, Hans M. & Norris, Robert S. 2017**). Last year Russia conducted the following ballistic tests: three ICBMs and more than five SLBMs (**Space Launch Report 2018**). Every October since 2013, Russia has conducted large-scale military maneuvers involving ICBM, SLBM and cruise missile launches. Last year however, ICBMs were not launched (**Podvig, Pavel 2018-3**).

In February 2018, the Trump administration released the Nuclear Posture Review (NPR), aimed at the maintenance and modernization of strategic nuclear weapons as well as the development of smaller and more agile warheads and cruise missiles to be launched from surface ships and submarines. In the following month, President Putin, in a State of Federation address, reacted in kind by disclosing the development of a series of new nuclear weapons (**Kremlin 2018**). Of these, the supersonic ballistic missile "Kinzhal," to be carried by interceptor fighters, is believed to be in deployment already (**TASS 2018-2**). Furthermore, both the flight test of the hypersonic glide vehicle "Avangard," to be carried in ICBMs and capable of breaching missile defense, and the in-water of the "Poseidon" unmanned underwater vehicle have been reported as successful (**TASS 2019-1**). All this escalation is enough to raise concerns reminiscent of Cold War nuclear buildup.

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NATO designation	Missile/bomb	No. of warheads per weapon	No. of warheads	Yield (kt)	Year first deployed	Remarks
Deployed	662		1,582			
Intercontinental ballistic missile (ICBM)	318		822			1)
SS-18 M6 Satan						
	46	6	276	500 or 800	1988	
a)						
SS-19 M3 Stiletto						
	10	6	60	400	1980	
b1)						
SS-19 M4 b2)	10	1	-	?	(2019)	(Avangard)
SS-25 Sickle						
	63	1	63	800	1988	
c)						
SS-27 M1 (silos)	60	1	60	800	1997	

d)

SS-27 M1(mobile)

18 1 18 800? 2006

e)

SS-27 M2(mobile)

99 3 297 100? 2010

f)

SS-27 M2 (silos)

12 4 48 100? 2014

g)

SS-X-30 (silos)

- 10 - 500? (2021)

h)

Submarine-launched ballistic missile (SLBM)

144

560

2)

SS-N-18 Stingray

Carried by the Delta III-class nuclear submarine

16 3 48 50 1978

i)

SS-N-23 Sineva

Carried by the Delta IV-class nuclear submarine

80 4 320 100 2007

j)

SS-N-32 Bulava

48 4 192 100 2014

Carried by the Borey-class nuclear submarine

k)					n)
	Strategic bomber payloads	200	200		3)
	AS-15A Kent A	1	200	1984	Carried by the Bear H
o)		200	200		r)
	AS-15B Kent B	1	200	1987	Carried by the Blackjack
p)					s)
	Nuclear bomb	1			
Reserve / Nondeployed			2,749		4)
Ground-based (ICBM, etc.)			823		
	ICBM		343		1)
	Ground-based non-strategic nuclear weapons		480		5)
t)					
Sea-based (SLBM, etc.)			980		
	SS-N-23		64	100	2)
	SS-N-32		96	100	2)
	Sea-based non-strategic nuclear weapons		820		6)
u)					
Air-launched systems (Bombers, etc.)			946		
	Missile , nuclear bomb		416		3)
	Non-strategic air-launched nuclear weapons		530		7)
v)					
Retired warheads awaiting dismantlement, etc.			~2,170		8)
Total inventory			~6,500		

[Notes]

- 1) This is in line with the latest estimates (**Kristensen, Hans M. & Korda, Matt 2019-2**). Changes from last year include nine (mobile) SS-27M2s replacing nine SS-25s at the Irkutsk Air Base (**Kristensen, Hans M. & Korda, Matt 2019-1**). Elsewhere, flight tests of the hypersonic glide vehicle "Avangard" continue aboard the SS-19. Its deployment is believed to date from 2019 (**RT 2018**). We set aside 10 SS-19s for the "Avangard," relegating the remaining original 60 warheads to reserves. Some estimates maintain that SS-19s are free of nuclear warheads (**Podvig, Pavel 2017-2**).
With a view to complying with the New START Treaty, SS-18s' warheads are believed to have been reduced from ten to six and SS-27 Mod 2s' from four to three. These reductions are now in reserve. The SS-X-30, set to replace SS-18s, commenced flight tests in 2019 and will likely begin deployment in 2021 (**Podvig, Pavel 2018-4**).
- 2) Russian strategic nuclear submarines currently consists of ten submarines in operational deployment and one in maintenance. The Delta III class, with K-44 Ryazan's sole exception (**Navaltoday 2017**), is all thought to have been retired (**Podvig, Pavel 2018-1**). Of the Delta IV class, K-117 Bryansk is believed to be in overhaul (**Podvig, Pavel 2017-5**), with five others in operational deployment. SLBM Blavars on three Borei-class submarines have been reduced to five warheads from the standard six, in order to adhere to the New START. The total Russian count, as a result, is 560 deployed warheads (3 warheads/missile x 16 missiles/submarine x 1 submarine + 4 warheads/missile x 16 missiles/submarine x 5 submarines + 4 warheads/missile x 16 missiles/submarine x 3 submarines), leaving 160 in reserve (64 per Delta IV in overhaul, and 96 not deployed on Blavars.)
- 3) The estimate (actual number of aircraft tasked for nuclear missions is around 70 aircrafts) for strategic bombers capable of carrying nuclear weapons is placed at 70 (**Kristensen, Hans M. & Norris, Robert S. 2019-1**), comprising 25 (actual 14) Bear H6, 30 (actual 25) Bear H16, and 13 (actual 11) Blackjack aircraft. Since they are capable of carrying six, 16 and 12 cruise missiles, respectively, we count a combined 616 warheads available for these strategic bombers to be in operational deployment/reserve. In peacetime, some 200 warheads are allocated to the bombers but not deployed to bombers, and stored on air bases at Ugra (Amur Oblast) and Engels (Saratov Oblast). These are counted as being deployed. The remainder are stored at a central depository and are counted as reserve stockpiles. An estimate for strategic bombers tasked for nuclear assignments is 55 Bear H6s/H16s and 11 Blackjacks for an operational missile total of approximately 200 missiles (**Podvig, Pavel 2017-3**).
- 4) Russia's reserve stockpile consists of warheads not loaded on ICBMs, those stored temporarily out of submarines during overhaul or not allocated to bombers, and non-strategic weapons. These are said to be stored in 48 locations across the Federation (**Norris, Robert S. & Kristensen, Hans M. 2009**). Since the end of the Cold War, Russia's tactical warheads have been significantly reduced, with current estimates pegging them at some 1,840 (see 520 + 820 + 500 on table). Each warhead, while tagged to a specific launch pad, is not deployed operationally and centrally stored (**Kristensen, Hans M. 2012**). The Russian Foreign Ministry, during the 2014 NPT Preparatory Committee, affirmed that all non-strategic warheads are categorized as nondeployed and assembled at multiple central storage sites (**Uliyanov, M. I. 2014**). According to a new noteworthy research finding about Russian tactical weapons (**Sutyagin, Igor 2012**), such concepts as operational deployments, central storages and surpluses need to be redefined, in accordance with the Russian military's unique operational practices. Sutyagin's analysis says that, of about 2,000 tactical nuclear weapons, some 1,000 are "operationally allocated" to launch pads and, though not loaded onto delivery means, kept in alert readiness for immediate use. Some of these may be found aboard ships or with ordnance units under the direct command of strike forces. Although this table adheres to Kristensen's reserve category, large amounts, conceptually, resemble more closely with Kristensen's operational deployments.
- 5) There are estimated to be 480 ground-launched tactical nuclear weapons. Of these, defensive missiles account for approximately 360 warheads, anti-air missiles 290 warheads, anti-ballistic missiles 68 warheads, and anti-ship missiles for coastal defense five. On the other hand, 16 platforms for the ground-launched cruise missile variant SSC-8 (for dual nuclear and non-nuclear use), which the US claimed to be an INF Treaty violation, have been identified (**Gordon, Michael R., 2019**), although the number of warheads in actual deployment is unknown.
- 6) There are estimated to be approximately 820 sea-launched tactical nuclear weapons, allocated to approximately 190 warships, submarines, ship-based aircraft, and helicopters. They are made up of anti-ship cruise missiles, anti-submarine rockets, land-attack cruise missiles, torpedoes, and depth charges. Most of the missiles are for dual nuclear and non-nuclear use (**Kristensen, Hans M. 2012**). Following the US notification to leave the INF, Russia responded by announcing a conversion of the sea-launched Kalibr cruise missiles to a ground-launched variant (**TASS 2019-2**).
- 7) Approximately 530 warheads are estimated to be allocated to aircraft in cruise missiles, short-range attack missiles, and gravity bombs. They are carried by the Tu-22M3 (NATO reporting name: Backfire C) intermediate-range bomber and the Su-24 (NATO reporting name: Fencer D) and Su-34 (NATO reporting name: Fullback) strategic bombers.
- 8) In the Megatons to Megawatts program carried out after the end of the Cold War, the high enriched uranium (HEU) from Russia's retired nuclear warheads was diluted and sold to the United States as fuel for nuclear power plants. This program was concluded at the end of 2013. Under this program, 20,000 nuclear warheads were disassembled over a 20-year period (**NNSA 2013**). With dismantling continuing, warheads retired and to-be-dismantled are now fewer in stock. In the coming years, Russia is expected to continue dismantling at a rate of 200-300 warheads per annum. (**Kristensen, Hans M. & Korda, Matt 2019-2**).

[Source]

- Gordon, Michael R. 2019:** "On Brink Of Arms Treaty Exit, U.S. Finds More Offending Russian Missiles," Wall Street Journal, January 31. <https://www.wsj.com/articles/on-brink-ofarms-treaty-exit-u-s-finds-more-offending-russianmissiles-11548980645> (accessed May 18,2019)
- Kremlin 2018:** "Presidential Address to the Federal Assembly," March 1, 2018. <http://en.kremlin.ru/events/president/news/56957> (accessed May 27,2019)
- Kristensen, Hans M. 2012:** "Non-Strategic Nuclear Weapons," Federation of American Scientists, Special Report No. 3, May, 2012. https://fas.org/_docs/Non_Strategic_Nuclear_Weapons.pdf (accessed May 27,2019)
- Kristensen, Hans M. 2017:** "Alert Status of Nuclear Weapons," briefing to George Washington University Elliott School's Short Course on Nuclear Weapons and Related Security Issues, April 21, 2017. https://fas.org/wp-content/uploads/2014/05/Brief2017_GWU_2s.pdf (accessed May 27,2019)
- Kristensen, Hans M. & Korda, Matt 2019-1:** "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, DOI: 10.1080/00963402.2019.1580891 (accessed May 15,2019)
- Kristensen, Hans M. & Korda, Matt 2019-2:** "Status of World Nuclear Forces," Federation of American Scientists, 2019. <http://fas.org/issues/nuclear-weapons/status-world-nuclear-forces/> (accessed May 15,2019)
- Kristensen, Hans M. & Norris, Robert S. 2017:** "Worldwide deployments of nuclear weapons, 2017," *Bulletin of the Atomic Scientists*, 73:5, 289-297, DOI: 10.1080/00963402.2017.1363995 (accessed May 27,2019)
- Navaltoday 2017:** "Russian nuclear-powered ballistic missile submarine Ryazan returns to service," February 16, 2017. <http://navaltoday.com/2017/02/16/russian-nuclear-powered-ballistic-missile-submarine-ryazan-returns-to-service/> (accessed May 27,2019)
- NNSA 2013:** "Under U.S.-Russia Partnership, Final Shipment of Fuel Converted From 20,000 Russian Nuclear Warheads Arrives in United States and Will Be Used for U.S. Electricity," December 11, 2013. <http://nnsa.energy.gov/mediaroom/pressreleases/megatonstomegawatts> (accessed January 8,2014)
- Podvig, Pavel 2014:** "Russian missile force readiness rate," http://russianforces.org/blog/2014/12/russian_missile_force_readines.shtml (accessed May 27,2019)
- Podvig, Pavel 2016:** "Deployment of RS-26 Rubezh reportedly postponed until 2017," May 12, 2016. http://russianforces.org/blog/2016/05/deployment_of_rs-26_rubezh_rep.shtml (accessed May 27,2019)
- Podvig, Pavel 2017-1:** "Flight tests of Barguzin rail-mobile ICBM are said to begin in 2019," January 19, 2017. http://russianforces.org/blog/2017/01/flight_tests_of_barguzin_rail-.shtml (accessed May 27,2019)
- Podvig, Pavel 2017-2:** "Strategic Rocket Forces," June 20, 2017. <http://russianforces.org/missiles/> (accessed May 27,2019)
- Podvig, Pavel 2017-3:** "Strategic aviation," June 20, 2017. <http://russianforces.org/aviation/> (accessed May 27,2019)
- Podvig, Pavel 2017-4:** "Barguzin rail-mobile ICBM is cancelled (again)," December 4, 2017. http://russianforces.org/blog/2017/12/barguzin_rail-mobile_icbm_is_c.shtml (accessed May 27,2019)
- Podvig, Pavel 2017-5:** "Bryansk begins overhaul," December 29, 2017. http://russianforces.org/blog/2017/12/bryansk_begins_overhaul.shtml (accessed May 27,2019)
- Podvig, Pavel 2018-1:** "Two Project 667BDR submarines withdrawn from service," March 14, 2018. http://russianforces.org/blog/2018/03/two_project_667bdr_submarines.shtml (accessed May 27,2019)
- Podvig, Pavel 2018-2:** "By cancelling RS-26 Russia keeps its options open," April 2, 2018. http://russianforces.org/blog/2018/04/by_cancelling_rs-26_russia_kee.shtml (accessed May 27,2019)
- Podvig, Pavel 2018-3:** "Annual exercise of the strategic forces, this time without ICBMs," October 11, 2018. http://russianforces.org/blog/2018/10/annual_exercise_of_the_strateg.shtml (accessed May 18,2019)
- Podvig, Pavel 2018-4:** "Sarmat deployment is said to begin in 2021," October 31, 2018. http://russianforces.org/blog/2018/10/sarmat_deployment_is_said_to_b.shtml (accessed May 18,2019)
- RT 2018:** "'Best New Year's gift to Russia': Putin boasts successful test of Avangard hypersonic glider," December 26, 2018. <https://on.rt.com/9l8x> (accessed May 18,2019)
- Space Launch Report 2018:** "2018 Major Suborbital Log," <http://www.spacelaunchreport.com/log2018.html#log2> (accessed May 15,2019)

Sutyagin, Igor 2012: "Atomic Accounting: A New Estimate of Russia's Non-Strategic Nuclear Forces," Royal United Services Institute, November 2012. https://rusi.org/sites/default/files/201211_op_atomic_accounting.pdf (accessed May 27,2019)

TASS 2018-1: "Avangard Hypersonic Missiles Replace Rubezh ICBMs in Russia's Armament Plan through 2027," March 22, 2018. <http://tass.com/defense/995628> (accessed May 18,2019)

TASS 2018-2: "Russian fighters armed with Kinzhal hypersonic missiles hold drills with strategic bombers," July 19, 2018. <http://tass.com/defense/1014048> (accessed May 18,2019)

TASS 2019-1: "Russian Navy to put over 30 Poseidon strategic underwater drones on combat duty – source," January 12, 2019. <http://tass.com/defense/1039603> (accessed May 18,2019)

TASS 2019-2: "Russia may develop land-based Kalibr cruise missile by end of year – source," February 7, 2019. <http://tass.com/defense/1043620> (accessed May 18,2019)

Uliyanov, M. I. 2014: NPT/CONF.2015/PC.III/17, 25 April 2014. <http://undocs.org/NPT/CONF.2015/PC.III/17> (accessed May 27,2019)

U.S. Department of State 2019: "New START Treaty Aggregate Numbers of Strategic Offensive Arms, Fact Sheet," March 1, 2019. <https://www.state.gov/wp-content/uploads/2019/05/AVC-03012019.pdf> (accessed June 5,2019)

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a) **ICBM R-36M2 Voevoda**

Russian designation : P-36M2 "Воевода"
Alternate name : RS-20V
NATO designation : SS-18 Mod. 6 Satan
Propulsion : Two-stage liquid propellant
Launch platform : Silo
No. of warheads : Maximum 10 warheads
Yield : 500kt/800kt per 1 warhead
Specifications : Length 34.3 m, Diameter 3.0 m, Weight 211 ton
Range : 11,000 km
Circular error probability : 220 m
Where deployed : Dombarovsky Air Base : 18 missiles
Uzhur Air Base : 28 missiles
Remarks : Voevoda means commander. The payload is thought to have been reduced to about six warheads, so as to comply with the New START Treaty. Its last test was believed to be on October 30, 2013, during a large-scale exercise on Russian Strategic Forces, in which a Voevoda was launched from Dombarovsky Air Base and successfully impacted on Kura test range in Kamchatka.
The Voevoda is expected to be retired by 2022. Its replacement program, liquid-fueled Sarmat, has suffered delays but is expected to commence deployment in 2021.

[Source]

Bukharin, Oleg et al. 2004: "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.218

CNN 2016: "Russia unveils 'Satan 2' missile, could wipe out France or Texas, report says," <http://edition.cnn.com/2016/10/26/europe/russia-nuclear-missile-satan-2/index.html> (accessed May 29,2019)

IHS Jane's 2015: "RS-20/R-36M/15A14/15A18," *Jane's Weapons*, Strategic 2015-2016, pp.95-98.

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, VOL. 75, NO. 2, 73–84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Norris, Robert S. & Kristensen, Hans M. 2009: "U.S. and Soviet/Russian intercontinental ballistic missiles, 1959–2008," *Bulletin of the Atomic Scientists*, VOL. 65, NO. 1, pp.62–69, <https://doi.org/10.2968/065001008> (accessed May 27,2019)

Podvig, Pavel 2012: "New heavy ICBM expected to be ready in 2019," December 14, 2012. http://russianforces.org/blog/2012/12/new_heavy_icbm_expected_to_be.shtml (accessed May 27,2019)

Podvig, Pavel 2013-1: "Russia conducts large-scale exercise of its strategic forces," October 30, 2013. http://russianforces.org/blog/2013/10/russia_conducts_large-scale_ex.shtml (accessed May 27,2019)

Podvig, Pavel 2013-2: "Some new missile system to be deployed in Dombarovskiy," December 18, 2013. http://russianforces.org/blog/2013/12/some_new_missile_system_to_be.shtml (accessed May 27,2019)

Podvig, Pavel 2017: "Strategic Rocket Forces," June 20, 2017. <http://russianforces.org/missiles/> (accessed May 27,2019)

Podvig, Pavel 2018: "Sarmat deployment is said to begin in 2021," October 31, 2018. http://russianforces.org/blog/2018/10/sarmat_deployment_is_said_to_b.shtml (accessed May 27,2019)

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b1) **Intercontinental ballistic missile UR-100N UTTH**

Russian designation : YP-100H YTTX
Alternate name : RS-18
NATO designation : SS-19 Mod. 3 Stiletto
Propulsion : Two-stage liquid propellant
Launch platform : Silo
No. of warheads : Maximum 6 warheads
Yield : 400kt per 1 warheads
Specifications : Length 24.3 m, Diameter 2.5 m, Weight 106 ton
Range : 10,000 km
Circular error probability : 350–430 m

Where deployed : Tatishchevo Air Base
Remarks : UR is the abbreviation for "Universal Rocket" and UTTH for "improved tactical and technical characteristics." Replacement with the fixed silo-based Yars(SS-27 Mod2) began in 2014, and the UR-100N UTTH is expected to be retired by 2019. Some observers believe warheads have been removed from SS-19s.

[Source]

- Bukharin, Oleg et al. 2004:** "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.222.
IHS Jane's 2015: "RS-18/UR-100N/15A30/15A35," *Jane's Weapons*, Strategic 2015-2016, pp.94-95.
Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)
Norris, Robert S. & Kristensen, Hans M. 2009: "U.S. and Soviet/Russian intercontinental ballistic missiles, 1959–2008," *Bulletin of the Atomic Scientists*, 65:1, 62-69, <https://doi.org/10.2968/065001008> (accessed May 29,2019)
Podvig, Pavel 2017: "Strategic Rocket Forces," June 20, 2017. <http://russianforces.org/missiles/> (accessed May 27,2019)
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b2) **Intercontinental ballistic missile UR-100N UTTH**

Russian designation : YP-100H YTTX
Alternate name : RS-18
NATO designation : SS-19 Mod. 4
Propulsion : Two-stage liquid propellant
Launch platform : Silo
No. of warheads : ?
Yield : ?
Specifications : Length 24.3 m, Diameter 2.5 m, Weight 106 ton
Range : 10,000 km
Circular error probability : 350–430 m
Where deployed : Dombarovsky Air Base
Remarks : Tests are under way with the hypersonic glide vehicle Avangard using the SS-19. The latest test took place on December 26, 2018, from an SS-18 silo from Dombarovsky Air Base and striking a target at the Kura test range in Kamchatka. The previously successful test was on October 26, 2016. The Avangard delivers multiple conventional and nuclear (in excess of 2,000 kilotons) warheads and, gliding at Mach 20, is said to be capable of breaching missile defense. Reports have it that two Avangards will be deployed at Dombarovsky Air Base. Russia's plan is to enhance this arsenal to a total 12 by 2027.

[Source]

- Bukharin, Oleg et al. 2004:** "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.222.
IHS Jane's 2015: "RS-18/UR-100N/15A30/15A35," *Jane's Weapons*, Strategic 2015-2016, pp.94-95.
Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)
Maxim Starchak 2009: 'Complexities and Challenges of Russia's Avangard Hypersonic Glide Reentry Vehicle,' *Eurasia Daily Monitor*, March 5, 2019. <https://jamestown.org/program/complexities-and-challenges-of-russias-avangard-hypersonic-glide-reentry-vehicle/> (accessed May 27,2019)
Podvig, Pavel 2016: "UR-100NUTTH launch from Dombarovskiy, most likely with Project 4202 payload," October 25, 2016. http://russianforces.org/blog/2016/10/ur-100nutth_launch_from_dombar.shtml (accessed May 27,2019)
Podvig, Pavel 2018-1: "Avangard hypersonic boost-glide system deployment plans," October 29, 2018. http://russianforces.org/blog/2018/10/avangard_hypersonic_boost-glid.shtml (accessed May 27,2019)
Podvig, Pavel 2018-2: "Avangard system is tested, said to be fully ready for deployment," December 26, 2018. http://russianforces.org/blog/2018/12/avangard_system_is_tested_said.shtml (accessed May 27,2019)
Tass 2018: "Russia to use SS-19 ICBMs as carriers for Avangard hypersonic glide vehicles — source," March 30, 2018. <http://tass.com/defense/995167> (accessed May 27,2019)
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c) **ICBM RT-2PM Topol**

Russian designation : RT-2PM "Тополь"
Alternate name : RS-12M
NATO designation : SS-25 Sickle
Propulsion : Three-stage solid-propellant
Launch platform : Transporter erector launcher
No. of warheads : 1 warheads
Yield : 800kt
Specifications : Length 21.5 m, Diameter 1.8 m, Weight 45.1 ton
Range : 10,500 km
Circular error probability : 350–430 m
Where : Yoshkar-Ola Air Base : 9 missiles

deployed : Novosibirsk Air Base : 18 missiles
Barnaul Air Base : 36 missiles

Remarks : Topol means "poplar". On October 26, 2017, Russian Strategic Missile Troops carried out a major exercise in which a missile was launched from the northwestern Plesetsk test range, which landed in the Kura test range on Kamchatka. This was thought to be for obtaining data for extending the service life of the missiles. Previously, the test was conducted on October 2, 2016. Currently, replacement by the mobile-launched Yars(SS-27 Mod2) is underway, and the Topol is expected to be retired by 2021.

Using RT-2PM Topol, Russia is believed to be developing payload for the 4K51 Rubezh ICBM system. The latest test launch was conducted on December 26, 2017, with a missile launched from Kapustin Yar in southern Russia landing in Sary-Shagan in Kazakhstan. The latest test, dated December 10, 2018, was a failure. The previous text, a success, took place December 26, 2017.

[Source]

Bukharin, Oleg et al. 2004: "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.232.

IHS Jane's 2015: "RS-12M Topol," *Jane's Weapons*, Strategic 2015-2016, pp.91-92.

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Norris, Robert S. & Kristensen, Hans M. 2009: "U.S. and Soviet/Russian intercontinental ballistic missiles, 1959-2008," *Bulletin of the Atomic Scientists*, 65:1, 62-69, <https://doi.org/10.2968/065001008>. (accessed May 29,2019)

Podvig, Pavel 2013: "Topol launch from Kapustin Yar tests new combat payload," October 10, 2013. http://russianforces.org/blog/2013/10/topol_launch_from_kapustin_yar_1.shtml (accessed May 29,2019)

Podvig, Pavel 2014: "Topol-E launched from Kapustin Yar," May 20, 2014. http://russianforces.org/blog/2014/05/topol-e_launched_from_kapustin.shtml (accessed May 29,2019)

Podvig, Pavel 2016: "Launch of Topol from Plesetsk," September 9, 2016. http://russianforces.org/blog/2016/09/launch_of_topol_from_plesetsk.shtml (accessed May 29,2019)

Podvig, Pavel 2017-1: "Strategic Rocket Forces," June 20, 2017. <http://russianforces.org/missiles/> (accessed May 27,2019)

Podvig, Pavel 2017-2: "Annual exercise of strategic forces," October 26, 2017. http://russianforces.org/blog/2017/10/annual_exercise_of_strategic_f.shtml (accessed May 29,2019)

Podvig, Pavel 2017-3: "Launch of Topol from Kapustin Yar," December 26, 2017. http://russianforces.org/blog/2017/12/launch_of_topol_from_kapustin_1.shtml (accessed May 29,2019)

Podvig, Pavel 2018-1: "Yars missiles continue to replace Topol," March 29, 2018. http://russianforces.org/blog/2018/03/yars_missiles_continue_to_repl.shtml (accessed May 28,2019)

Podvig, Pavel 2018-2: "By cancelling RS-26 Russia keeps its options open," April 2, 2018. http://russianforces.org/blog/2018/04/by_cancelling_rs-26_russia_kee.shtml (accessed May 28,2019)

Podvig, Pavel 2018-3: "Looks like a Topol-E failure in a launch from Kapustin Yar," December 12, 2018. http://russianforces.org/blog/2018/12/looks_like_a_topol-e_failure_i.shtml (accessed May 28,2019)

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d) **ICBM RT-2PM2 Topol M**

Russian designation : PT-2PM2 "Тополь-М"

Alternate name : RS-12M1

NATO designation : SS-27 Mod. 1 (silo)

Propulsion : Three-stage solid-propellant

Launch platform : Silo

No. of warheads : 1 warhead

Yield : 800kt

Specifications : Length 21.5 m, Diameter 1.8 m, Weight 45.1 ton

Range : 10,500 km

Circular error probability : 350-430 m

Where deployed : Tatishchevo Air Base : 60 missiles

Remarks : Deployment of 60 silo-based Topol M missiles seemed to be completed at Tatishchevo. The latest test launch was conducted on January 16, 2017. A missile launched from the Plesetsk test range landed at the Kura test range on Kamchatka. It is assumed the objective was to validate ballistic stability and other technical characteristics.

[Source]

Bukharin, Oleg et al. 2004: "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.233.

IHS Jane's 2015: "RS-12M1/2 Topol-M (RT-2PM2)," *Jane's Weapons*, Strategic 2015-2016, pp.93-94.

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Norris, Robert S. & Kristensen, Hans M. 2009: "U.S. and Soviet/Russian intercontinental ballistic missiles, 1959-2008," *Bulletin of the Atomic Scientists*, 65:1, 62-69, <https://doi.org/10.2968/065001008>. (accessed May 29,2019)

Podvig, Pavel 2015: "Topol-M deployment in Tatishchevo continues," February 13, 2015. http://russianforces.org/blog/2015/02/topol-m_deployment_in_tatishch.shtml (accessed May 29,2019)

Podvig, Pavel 2017-1: "Test launch of silo-based Topol-M from Plesetsk," January 16, 2017. http://russianforces.org/blog/2017/01/test_launch_of_silo-based_topo_1.shtml (accessed May 29,2019)

Podvig, Pavel 2017-2: "Strategic Rocket Forces," June 20, 2017. <http://russianforces.org/missiles/> (accessed May 27,2019)

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e) **Intercontinental ballistic missile RT-2PM2 Topol M**

Russian designation : RT-2PM2 "Тополь-М"
 Alternate name : RS-12M2
 NATO designation : SS-27 Mod. 1 (mobile)
 Propulsion : Three-stage solid-propellant
 Launch platform : Transporter erector launcher
 No. of warheads : 1 warhead
 Yield : 800kt
 Specifications : Length 21.5 m, Diameter 1.8 m, Weight 45.1 ton
 Range : 10,500 km
 Circular error probability : 350–430 m
 Where deployed : Teykovo Air Base : 18 missiles
 Remarks : Deployment of 18 mobile-launched Topol M missiles has been completed at Teykovo Air Base. The latest test launch was conducted on November 1, 2014. A missile launched from the Plesetsk test range landed at the Kura test range on Kamchatka. It is assumed the objective was to gather relevant data for potential lifetime extensions.

[Source]

- Bukharin, Oleg et al. 2004:** "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.233.
IHS Jane's 2015: "RS-12M1/2 Topol-M (RT-2PM2)," *Jane's Weapons*, Strategic 2015-2016, pp.93-94.
Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)
Norris, Robert S. & Kristensen, Hans M. 2009: "U.S. and Soviet/Russian intercontinental ballistic missiles, 1959–2008," *Bulletin of the Atomic Scientists*, 65:1, 62–69, <https://doi.org/10.2968/065001008>. (accessed May 29,2019)
Podvig, Pavel 2012: "Topol-M and RS-24 Yars deployment plans," December 14, 2012. http://russianforces.org/blog/2012/12/topol-m_and_rs-24_yars_deploym.shtml (accessed May 29,2019)
Podvig, Pavel 2017: "Strategic Rocket Forces," June 20, 2017. <http://russianforces.org/missiles/> (accessed May 27,2019)
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f) **ICBM Yars**

Russian designation : Ярс
 Alternate name : RS-24
 NATO designation : SS-27 Mod. 2 (mobile)
 Propulsion : Three-stage solid-propellant
 Launch platform : Transporter erector launcher
 No. of warheads : Maximum 4 warheads
 Yield : 100kt? per 1 warhead
 Specifications : Length 20.9 m, Diameter 2.0 m, Weight 49.0 ton
 Range : 10,500 km
 Circular error probability : 250m
 Where deployed : Teykovo Air Base : 18 missiles
 Novosibirsk Air Base : 27 missiles
 Nizhniy Tagil Air Base : 27 missiles
 Irkutsk Air Base : 9 missiles
 Vypolzovo Air Base : 9 missiles
 Remarks : The mobile-launched Yars is consecutively replacing the SS-25. The most recent test on February 6, 2019, took a missile from the Plesetsk test range to the Kura test range in Kamchatka. The purpose was to validate desired missile attributes. The previous test was in June 2018. Russia undertook to develop a railway-borne ICBM system, RS-24 Yars (Barguzin BZhRK), in reaction to the U.S. Prompt Global Strike (PGS) initiative. The program is now believed to have been postponed or abandoned.

[Source]

- IHS Jane's 2015:** "RS-24 Yars," *Jane's Weapons*, Strategic 2015-2016, pp.98-99.
Kristensen, Hans M. 2012: "Trimming Nuclear Excess -Options for Further Reductions of U.S. and Russian Nuclear Forces," Federation of American Scientists, Special Report No. 5, December, 2012. <https://fas.org/programs/ssp/nukes/publications1/TrimmingNuclearExcess.pdf> (accessed May 29,2019)
Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)
Podvig, Pavel 2013: "Two RS-24 Yars regiments begin combat duty," December 30, 2013. http://russianforces.org/blog/2013/12/two_rs-24_yars_regiments_begin.shtml (accessed May 29,2019)
Podvig, Pavel 2016-1: "Barguzin project refuses to die," May 18, 2016. http://russianforces.org/blog/2016/05/barguzin_project_refuses_to_di.shtml (accessed May 29,2019)
Podvig, Pavel 2016-2: "RS-24 Yars is replacing Topol in Vypolzovo and elsewhere," September 21, 2016. http://russianforces.org/blog/2016/09/rs-24_yars_is_replacing_topol.shtml (accessed May 29,2019)
Podvig, Pavel 2017-1: "Flight tests of Barguzin rail-mobile ICBM are said to begin in 2019," January 19, 2017. http://russianforces.org/blog/2017/01/flight_tests_of_barguzin_rail-.shtml (accessed May 29,2019)
Podvig, Pavel 2017-2: "Strategic Rocket Forces," June 20, 2017. <http://russianforces.org/missiles/> (accessed May 27,2019)

Podvig, Pavel 2017-3: "Training launch of Yars ICBM from Plesetsk," September 20, 2017. http://russianforces.org/blog/2017/09/training_launch_of_yars_icbm_f.shtml (accessed May 29,2019)

Podvig, Pavel 2017-4: "Barguzin rail-mobile ICBM is cancelled (again)," December 4, 2017. http://russianforces.org/blog/2017/12/barguzin_rail-mobile_icbm_is_c.shtml (accessed May 29,2019)

Podvig, Pavel 2019: "Yars launch from Plesetsk," February 6, 2019. http://russianforces.org/blog/2019/02/yars_launch_from_plesetsk.shtml (accessed May 28,2019)

TASS 2018: "Avangard Hypersonic Missiles Replace Rubezh ICBMs in Russia's Armament Plan through 2027," March 22, 2018. <http://tass.com/defense/995628> (accessed May 18,2019)

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g) ICBM Yars

Russian designation : Ярс
Alternate name : RS-24
NATO designation : SS-27 Mod. 2 (silo)
Propulsion : Three-stage solid-propellant
Launch platform : Silo
No. of warheads : Maximum 4 warheads
Yield : 100kt? per 1 warhead
Specifications : Length 20.9 m, Diameter 2.0 m, Weight 49.0 ton
Range : 10,500 km
Circular error probability : 250
Where deployed : Kozelsk Air Base : 12 missiles
Remarks : Fixed silo types have been deployed by replacing the SS-19s at Kozelsk Air Base from August 20,2014. The latest test launch was conducted on September 12, 2017. A missile launched from the Plesetsk test range landed at the Kura test range on Kamchatka. While the objective was likely to validate ballistic stability and other technical characteristics, some reports claim that the test was also about "minibus" warheads targeting the U.S. missile defense.

[Source]

IHS Jane's 2015: "RS-24 Yars," *Jane's Weapons*, Strategic 2015-2016, pp.98-99.

Kristensen, Hans M. 2012: "Trimming Nuclear Excess -Options for Further Reductions of U.S. and Russian Nuclear Forces," Federation of American Scientists, Special Report No. 5, December, 2012. <https://fas.org/programs/ssp/nukes/publications1/TrimmingNuclearExcess.pdf> (accessed May 26,2019)

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Podvig, Pavel 2012-2: "Topol-M and RS-24 Yars deployment plans," December 14, 2012. http://russianforces.org/blog/2012/12/topol-m_and_rs-24_yars_deploym.shtml (accessed May 29,2019)

Podvig, Pavel 2014: "First two RS-24 Yars installed in silos in Kozelsk," August 20, 2014. http://russianforces.org/blog/2014/08/first_two_rs-24_yars_installed.shtml (accessed May 29,2019)

Podvig, Pavel 2015: "Test of silo-based RS-24 Yars from Plesetsk," October 28, 2015. http://russianforces.org/blog/2015/10/test_of_silo-based_rs-24_yars.shtml (accessed May 27,2019)

Podvig, Pavel 2017-1: "Strategic Rocket Forces," June 20, 2017. <http://russianforces.org/missiles/> (accessed May 27,2019)

Podvig, Pavel 2017-2: "Test launch of Yars missile with "experimental warheads"," September 12, 2017. http://russianforces.org/blog/2017/09/test_launch_of_yars_missile_wi.shtml (accessed May 29,2019)

Podvig, Pavel 2017-3: "Yars launch in September tested parallel deployment of warheads," October 4, 2017. http://russianforces.org/blog/2017/10/yars_launch_in_september_teste.shtml (accessed May 27,2019)

Podvig, Pavel 2018: "First silo-based Yars regiment in Kozelsk is fully operational," December 15, 2018. http://russianforces.org/blog/2018/12/first_silo-based_yars_regiment.shtml (accessed May 28,2019)

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h) ICBM Sarmat

Russian designation : Сармат
Alternate name : RS-28
NATO designation : SS-X-30 Satan 2
Propulsion : Two-stage liquid propellant
Launch platform : Silo
No. of warheads : Maximum 10 warheads ?
Yield : 500kt per 1 warhead ?
Specifications : Length 36.3 m, Diameter 3.0 m, Weight 200 ton
Range : 11,000 km
Circular error probability : ?
Where deployed : Dombrovsky Air Base
Uzhur Air Base
Remarks : Under development as an SS-18 replacement. But there have been significant delays due to test launch troubles. Flight tests commenced in 2019, with deployment due in 2021. Reportedly, they are to comprise an ordnance of 46 missiles for the Dombrovsky and Uzhur Air Bases: six each for six regiments plus ten for another regiment. In October 2016, the Russian developer of Sarmat released the photographs. Sarmat's test launches commenced on

December 27, 2017, and a second test, conducted either on March 28 or 29, 2018, had some public disclosure. Sarmat is named after the once-flourished early nomadic Sarmatians.

[Source]

- Gady, Franz-Stefan 2018:** "Russia's Strategic Rocket Force Tests Ejection of Deadly Sarmat Intercontinental Ballistic Missile," *The Diplomat*, March 30, 2018, <https://thediplomat.com/2018/03/russias-strategic-rocket-force-tests-ejection-of-deadly-sarmat-intercontinental-ballistic-missile/> (accessed May 27,2019)
- Kristensen, Hans M. & Korda, Matt 2019:** "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73–84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)
- The Missile Threat 2017:** "SS-X-30 "Satan II" (RS-28 Sarmat)," 17 May 2017. <https://missilethreat.csis.org/missile/rs-28-sarmat/> (accessed May 27,2019)
- Podvig, Pavel 2013:** "Some new missile system to be deployed in Dombrovskiy," December 18, 2013. http://russianforces.org/blog/2013/12/some_new_missile_system_to_be.shtml (accessed May 27,2019)
- Podvig, Pavel 2016:** "Sarmat to be deployed in Uzhur and Dombrovskiy," May 9, 2016. http://russianforces.org/blog/2016/05/sarmat_to_be_deployed_in_uzhur.shtml (accessed May 27,2019)
- Podvig, Pavel 2017:** "Sarmat ejection test, at last," December 29, 2017. http://russianforces.org/blog/2017/12/sarmat_ejection_test_at_last.shtml (accessed May 27,2019)
- Podvig, Pavel 2018-1:** "Second ejection test of Sarmat," March 30, 2018. http://russianforces.org/blog/2018/03/second_ejection_test_of_sarmat.shtml (accessed May 27,2019)
- Podvig, Pavel 2018-2:** "Sarmat to begin flight tests in 2019," October 3, 2018. http://russianforces.org/blog/2018/10/sarmat_to_begin_flight_tests_i.shtml (accessed May 27,2019)
- Podvig, Pavel 2018-3:** "Sarmat deployment is said to begin in 2021," October 31, 2018. http://russianforces.org/blog/2018/10/sarmat_deployment_is_said_to_b.shtml (accessed May 27,2019)
- TASS 2018-1:** "Key facts about Russia's advanced Sarmat ICBM system," March 1, 2018. <http://tass.com/defense/992360> (accessed May 27,2019)
- TASS 2018-2:** "Russia completes building infrastructure for Sarmat ICBMs," December 17, 2018. <http://tass.com/defense/1036386> (accessed May 27,2019)

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i) **Submarine-launched ballistic missile R-29R**

Russian designation :	P-29P
Alternate name :	RSM-50
NATO designation :	SS-N-18 Mod. 1 Stingray
Propulsion :	Two-stage liquid propellant
Launch platform :	Project 667BDRM Strategic Nuclear Submarine Delfin
No. of warheads :	Maximum 3 warheads
Yield :	50kt per 1 warhead
Specifications :	Length 14.1 m, Diameter 1.8 m, Weight 35.3 ton
Range :	6,500 km
Circular error probability :	900 m
Remarks :	The latest test launch was conducted on October 11, 2018. Russian Strategic Forces carried out a major exercise in which Delta III K-44 Ryazan fired multiple Stingray missiles from the Sea of Okhotsk, which landed in the Chizha test range on the Kanin Peninsula.

[Source]

- Bukharin, Oleg et al. 2004:** "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.331.
- IHS Jane's 2015:** "R-29R Volna (SS-N-18 'Stingray'/RSM-50/3M40)," *Jane's Weapons*, Strategic 2015–2016, pp.89–91.
- Kristensen, Hans M. & Korda, Matt 2019:** "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73–84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)
- Podvig, Pavel 2017:** "Strategic fleet," June 20, 2017. <http://russianforces.org/navy/> (accessed May 27,2019)
- Podvig, Pavel 2018:** "Annual exercise of the strategic forces, this time without ICBMs," October 11, 2018 http://russianforces.org/blog/2018/10/annual_exercise_of_the_strateg.shtml (accessed May 27,2019)

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j) **SLBM R-29RMU Sineva**

Russian designation :	P-29PMU СИНЕВА
Alternate name :	RSM-54
NATO designation :	SS-N-23 Mod. 1
Propulsion :	Three-stage liquid propellant
Launch platform :	Project 667BDRM Strategic Nuclear Submarine Delfin
No. of warheads :	Maximum 10 warheads (Minimum seems to be 4 warheads)
Yield :	100kt per 1 warhead
Specifications :	Length 14.8 m, Diameter 1.9 m, Weight 40.3 ton
Range :	8,300 km
Circular error probability :	500 m
Remarks :	Sineva means "blue". The latest test launch conducted on October 11, 2018. Russian Strategic Missile Troops carried out a major exercise in which a Delta IV nuclear submarine (name unknown) launched a Sineva missile from the

Barents Sea, which landed in the Kura test range on Kamchatka. Russia has developed the R-29RMU2 Liner, which is an improvement over the R-29RMU Sineva, and the Russian Navy reportedly began receiving Liner SLBMs in 2014. The latest test launch was conducted on September 29, 2011. In reality, the Liner is a Sineva with four warheads.

[Source]

Bukharin, Oleg et al. 2004: "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.336.

IHS Jane's 2015: "R-29RM Shetal/Sineva (RSM-54/3M27)," *Jane's Weapons*, Strategic 2015–2016, pp.88–89.

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73–84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Podvig, Pavel 2011: "Second test of the Liner SLBM – Blog – Russian strategic nuclear forces," September 29, 2011. http://russianforces.org/blog/2011/09/second_test_of_the_liner_slbm.shtml (accessed May 29,2019)

Podvig, Pavel 2014-1: "Liner version of the R-29RM SLBM accepted for service," April 2, 2014. http://russianforces.org/blog/2014/04/liner_version_of_the_r-29rm_sl.shtml (accessed May 29,2019)

Podvig, Pavel 2014-2: "Sineva missile launched from Tula submarine," November 5, 2014. http://russianforces.org/blog/2014/11/sineva_missile_launched_from_t.shtml (accessed May 29,2019)

Podvig, Pavel 2017: "Strategic fleet," June 20, 2017. <http://russianforces.org/navy/> (accessed May 27,2019)

Podvig, Pavel 2018: "Annual exercise of the strategic forces, this time without ICBMs," October 11, 2018. http://russianforces.org/blog/2018/10/annual_exercise_of_the_strateg.shtml (accessed May 27,2019)

RusNavy.com 2012: "Russia Finished Development of SLBM Liner," February 24, 2012. http://rusnavy.com/news/navy/index.php?ELEMENT_ID=14406 (accessed May 29,2019)

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k) SLBM R-30 Bulava

Russian designation :	P-30 Булава
Alternate name :	RSM-56
NATO designation :	SS-N-32
Propulsion :	Three-stage solid-propellant
Launch platform :	955 class submarine (Borey)
No. of warheads :	Maximum 10 warheads (6 warheads seem to be carried.)
Yield :	100-150kt per 1 warhead
Specifications :	Length 12.1 m, Diameter 2.0 m, Weight 36.8 ton
Range :	8,300 km
Circular error probability :	300 m
Remarks :	Bulava means "cudgel". Currently deployed on three Borei-class submarines. The last test launch was conducted on May 22, 2018, with the first vessel of this class, K-535 Yuriy Dolgorukiy, firing four Bulavas from the White Sea and striking the Kura test range on Kamchatka. To date, while there had been three consecutive launches of two missiles each, a quadruple salvo was unprecedented. 29-32 Bulavas are known to have been test-launched. The last test was conducted on June 26, 2017. Even though the maximum payload is said to be six warheads, the Russians are seen keeping it down to about four, in compliance with the New START Treaty.

[Source]

IHS Jane's 2015: "Bulava (RSM-56)," *Jane's Weapons*, Strategic 2015–2016, p.79

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73–84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Podvig, Pavel 2014: "Missile deliveries in 2014 and plans for 2015," December 19, 2014. http://russianforces.org/blog/2014/12/missile_deliveries_in_2014.shtml (accessed May 29,2019)

Podvig, Pavel 2015: "Alexander Nevskiy with missiles on board," April 13, 2015. http://russianforces.org/blog/2015/04/alexander_nevskiy_with_missile.shtml (accessed May 29,2019)

Podvig, Pavel 2016: "Success reported in salvo Bulava launch from Yuri Dolgorukiy," September 27, 2016. http://russianforces.org/blog/2016/09/success_reported_in_salvo_bula.shtml (accessed May 29,2019)

Podvig, Pavel 2017: "Strategic fleet," June 20, 2017. <http://russianforces.org/navy/> (accessed May 27,2019)

Podvig, Pavel 2018-1: "Four-missile salvo launch of Bulava from Yuri Dolgorukiy," May 22, 2018. http://russianforces.org/blog/2018/05/four-missile_salvo_launch_of_b.shtml (accessed May 29,2019)

Podvig, Pavel 2018-2: "Bulava is finally accepted for service," June 29, 2018. http://russianforces.org/blog/2018/06/bulava_is_finally_accepted_for.shtml (accessed May 29,2019)

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l) 667BDR Strategic nuclear submarine Kalmar

Russian designation :	667БДР "Кальмар"
NATO designation :	Delta III
No. of tubes :	16
SLBM :	Stingray (RSM-50)
Specifications :	Length 155 m, Width 12 m, Displacement underwater 13,000 ton
Submerged speed :	25knot (km/h46 km)
Where deployed :	Pacific Fleet base (Vilyuchinsk)
In service :	K-44 Ryazan

Remarks : Deployment began in 1976, and 14 submarines were commissioned. Today the K-44 Ryazan, returned to service from long-term overhaul in February 2017, remains the only active submarine of this class. It was understood that Russia's plan was to begin replacing three Delta III submarines in active commission with the new 955 Borei I class. Recently, the K-223 Podolsk and K-433 Svyatoy Georgiy Pobedonosets were retired.

[Source]

Bukharin, Oleg et al. 2004: "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.233.

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73–84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Podvig, Pavel 2017-1: "Strategic fleet," June 20, 2017. <http://russianforces.org/navy/> (accessed May 27,2019)

Podvig, Pavel 2017-2: "Ryazan Project 667BDR submarine is back in service," February 15, 2017. http://russianforces.org/blog/2017/02/ryazan_project_667bdr_submarin.shtml (accessed May 29,2019)

Podvig, Pavel 2018: "Two Project 667BDR submarines withdrawn from service," March 14, 2018. http://russianforces.org/blog/2018/03/two_project_667bdr_submarines.shtml (accessed May 29,2019)

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m) **667BDRM Strategic Nuclear Submarine Delfin**

Russian designation : 667БДРМ "Дельфин"

NATO designation : Delta IV

Propulsion : Three-stage solid-propellant

No. of tubes : 16

SLBM : Sineva (RSM-54)

Specifications : Length 167 m, Width 12 m, Displacement underwater 13,600 ton

Submerged speed : 22–23knot (km/h41–43 km)

Where deployed : Northern Fleet base (Gadzhiiyev)

In service : K-51 Verkhoturie
K-84 Ekaterinburg
K-114 Tula
K-117 Bryansk
K-18 Karelia
K-407 Novomoskovsk

Remarks : Deployments began in 1985, with seven constructed to date but the six listed above in service today. Four and five are regularly kept in operational deployment, with the remainder in overhaul. As of June 1, 2019, only K-117 Bryansk is believed to be in overhaul. Since 2013, the 667BDRM Kal'mar has participated in each annual maneuver and test-fired missiles. Currently, five 955A (Borei II) submarines, an improvement over the 955 Borei I class, are under construction, to replace the 667BDRM. All 667BDRM submarines will have retired by 2019, according to some reports.

[Source]

Bukharin, Oleg et al. 2004: "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.233

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73–84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Podvig, Pavel 2017-1: "Strategic fleet," June 20, 2017. <http://russianforces.org/navy/> (accessed May 27,2019)

Podvig, Pavel 2017-2: "Tula submarine completed overhaul," December 28, 2017. http://russianforces.org/blog/2017/12/tula_submarine_completed_overh.shtml (accessed May 27,2019)

Podvig, Pavel 2017-3: "Bryansk begins overhaul," December 29, 2017. http://russianforces.org/blog/2017/12/bryansk_begins_overhaul.shtml (accessed May 29,2019)

Podvig, Pavel 2018: "Annual exercise of the strategic forces, this time without ICBMs," October 11, 2018. http://russianforces.org/blog/2018/10/annual_exercise_of_the_strateg.shtml (accessed May 27,2019)

Podvig, Pavel 2019: "Project 667BDRM submarines will stay in service until 2029," March 18, 2019. http://russianforces.org/blog/2019/03/project_667bdrm_submarines_wil.shtml (accessed May 27,2019)

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n) **955 Strategic nuclear submarine Borey**

Russian designation : Боре́й

NATO designation : Borey

No. of tubes : 16

SLBM : Bulava (RSM-56)

Specifications : Length 170 m, Width 13.5 m, Displacement underwater 19,400 ton

Submerged speed : 25 knot (km/h 46 km)

Where deployed : Northern Fleet base (Gadzhiiyev) (1st and 3rd vessels)
Pacific Fleet base (Vilyuchinsk) (2nd vessel)

In service : K-535 Yuriy Dolgorukiy
K-550 Aleksandr Nevskiy
K-551 Vladimir Monomakh

Remarks : Three 955 (BoreiI) vessels are being built as the successor to the 667BDR type. The first vessel, the Yury Dolgorukiy was commissioned in January 2013, and the second, the Alexander Nevsky in December 2013. The third vessel, the Vladimir Monomakh was also commissioned in December 2014. All three vessels have successfully launched SLBM Bulavas. On the other hand, five 955A (BoreyA/II) vessels are being built as substitutes for the 667BDRM type. Previously each vessel was reported to have 20 missiles, but now the general view is that there are 16. The first vessel, Knyaz Vladimir, was launched in November 2017 and expected to be commissioned in the late 2019. The second vessel, Knyaz Oleg, the third Generalissimus Suvorov, the fourth vessel, Imperator Aleksandr III, and the fifth

vessel, Knyaz Pozharskiy will be commissioned in 2020s.
Two more Borei-A submarines and four of the Borei-B class, with greater propulsion capability, are going to be constructed, as per media reports.

[Source]

- Gady, Franz-Stefan 2019:** "Will Russia Build *Borei B*-Class Ballistic Missile Subs?," *The Diplomat*, April 18, 2019, <https://thediplomat.com/2019/04/will-russia-build-borei-b-class-ballistic-missile-subs/> (accessed May 29,2019)
- Kristensen, Hans M. 2012:** "Trimming Nuclear Excess -Options for Further Reductions of U.S. and Russian Nuclear Forces," *Federation of American Scientists, Special Report No. 5*, December, 2012. <https://fas.org/programs/ssp/nukes/publications1/TrimmingNuclearExcess.pdf> (accessed May 29,2019)
- Kristensen, Hans M. & Korda, Matt 2019:** "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)
- Podvig, Pavel 2013-1:** "Yuri Dolgorukiy submarine officially accepted for service," January 10, 2013. http://russianforces.org/blog/2013/01/yuri_dolgorukiy_submarine_offi.shtml (accessed May 27,2019)
- Podvig, Pavel 2013-2:** "Project 955A submarines to carry 16 missiles," February 21, 2013. http://russianforces.org/blog/2013/02/project_955a_submarines_to_car.shtml (accessed May 29,2019)
- Podvig, Pavel 2013-3:** "Aleksandr Nevskiy submarine joined the Pacific Fleet," December 23, 2013. http://russianforces.org/blog/2013/12/aleksandr_nevskiy_submarine_jo.shtml (accessed May 29,2019)
- Podvig, Pavel 2014-1:** "Ekaterinburg and Vladimir Monomakh join the fleet," December 19, 2014. http://russianforces.org/blog/2014/12/ekaterinburg_and_vladimir_mono.shtml (accessed May 27,2019)
- Podvig, Pavel 2014-2:** "Sixth Project 955 Borey submarine laid down," December 26, 2014. http://russianforces.org/blog/2014/12/sixth_project_955_borey_submar.shtml (accessed May 29,2019)
- Podvig, Pavel 2015-2:** "Seventh Project 955 Borey submarine laid down," December 18, 2015. http://russianforces.org/blog/2015/12/seventh_project_955_borey_subm.shtml (accessed May 29,2019)
- Podvig, Pavel 2016:** "The eighth Project 955 Borey submarine laid down at Sevmas," December 23, 2016. http://russianforces.org/blog/2016/12/the_eighth_project_955_sub.shtml (accessed May 29,2019)
- Podvig, Pavel 2017:** "Strategic fleet," June 20, 2017. <http://russianforces.org/navy/> (accessed May 27,2019)
- Podvig, Pavel 2018:** "Two more Borei-A submarines to be built by 2028t," December 4, 2018. http://russianforces.org/blog/2018/12/two_more_borey-a_submarines_to.shtml (accessed May 29,2019)
- TASS 2014:** "Russia's Sevmas shipyard lays down 5th Borei-class nuclear sub – Knyaz Oleg," July 27, 2014. <http://tass.com/russia/742472> (accessed June 11,2018)
- Tass 2017-1:** "Russia starts development of Borei-B nuclear-powered submarines," November 7, 2017. <http://tass.com/defense/974454> (accessed May 29,2019)
- Tass 2017-2:** "Russian Navy to receive improved Borei-class strategic submarine in 2026 — source," December 25, 2017. <http://tass.com/defense/982864> (accessed May 29,2019)
- Tass 2018:** "Russian Navy to get improved Borei-class nuclear submarine in 2019," April 25, 2018. <http://tass.com/defense/1001781> (accessed May 29,2019)

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o)

Cruise missile Kh-55

Russian designation : X-55
NATO designation : AS-15A Kent A
Carried by : Tu-95MS (NATO reporting name : Bear H)
Yield : 200kt
Specifications : Length 8.09 m, Diameter 0.51 m, Weight 1.7 ton
Range : 2,500 km
Remarks : The Tu-95MS6 carries six missiles internally, and the 95MS16 can carry a further 10 missiles underneath the wings. The sea-launched variant of these missiles is the non-strategic nuclear RK-55 (SS-N-21). The much stealthier (250 kT) Kh-102 is in development to replace the Kh-55. The conventional Kh-101 warhead is already in deployment and saw action for the first time on November 17, 2015, when Tupolev Tu-160 and Tu-95MS strategic bombers in Syria fired the missile in an air raid.

[Source]

- Bukharin, Oleg et al. 2004:** "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.365.
- FAS 2013:** "AS-15 KENT – Russian and Soviet Nuclear Forces," <http://www.fas.org/nuke/guide/russia/bomber/as-15.htm> (accessed June 11,2018)
- IHS Jane's 2015-1:** "Kh-55 (AS-15 'Kent'/Kh-555/RKV-500/Kh-65)", *IHS Jane's Weapons: Strategic 2015-2016*, pp.184-186.
- IHS Jane's 2015-2:** "Kh-101/-102", *IHS Jane's Weapons: Strategic 2015-2016*, pp.189-190.
- IHS Jane's 360 2015:** "Russia launches long-range air sorties into Syria," 18 November 2015. <http://www.janes.com/article/56062/russia-launches-long-range-air-sorties-into-syria> (accessed June 10,2016)
- Kristensen, Hans M. & Korda, Matt 2019:** "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)
- Missile Defense Project 2018:** "Kh-101 / Kh-102," *Missile Threat*, Center for Strategic and International Studies, October 26, 2017, last modified June 15, 2018. <https://missilethreat.csis.org/missile/kh-101-kh-102/> (accessed May 29,2019)
- Podvig, Pavel 2015:** "Tu-95MS and Tu-160 strategic bombers used in Syria strikes," November 17, 2015. http://russianforces.org/blog/2015/11/tu-95ms_and_tu-160_strategic_b.shtml (accessed May 29,2019)
- Podvig, Pavel 2017:** "Strategic aviation," June 20, 2017. <http://russianforces.org/aviation/> (accessed May 27,2019)
- Sputnik News 2012:** "Russian Air Force to Get New Cruise Missile in 2013," September 26, 2012. <http://sputniknews.com/military/20120926/176233341.html> (accessed May 27,2019)

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p)

Cruise missile Kh-55SM

Russian designation : X-55CM
NATO designation : AS-15B Kent B
Carried by : Tu-160 (NATO designation : Blackjack)
Yield : 200kt
Specifications : Length 8.09 m, Diameter 0.77 m, Weight 1.7 ton
Range : 3,000 km

Remarks : This is a longer range version of the Kh-55. The Tu-160 carries 12 missiles.

[Source]

Bukharin, Oleg et al. 2004: "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.365.

FAS 2013: "AS-15 KENT – Russian and Soviet Nuclear Forces," <http://www.fas.org/nuke/guide/russia/bomber/as-15.htm> (accessed June 11,2018)

IHS Jane's 2015: "Kh-55 (AS-15 'Kent'/Kh-555/RKV-500/Kh-65)", *IHS Jane's Weapons: Strategic 2015–2016*, pp.184–186.

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73–84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Podvig, Pavel 2017: "Strategic aviation," June 20, 2017. <http://russianforces.org/aviation/> (accessed May 27,2019)

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r) Strategic bomber Tu-95 MS6/-16

Russian designation : Туполев Ту-95МС6/-16

NATO designation : Bear H6/16

Nuclear weapon : Air launch cruise missile Kh-55. The Tu-95 MS6 can carry six missiles internally. In addition, the 95 MS16 can carry a further 10 missiles underneath the wings for a total of 16 (however, its flight range drops commensurately).

Specifications : Length 49.5 m, Span 51.1 m (Propeller aircraft)

Max. speed : 830 km/h

Range : 10,500 m

Where deployed : Ukrainka Air Base and Engels Air Base

Remarks : In the Russian Strategic Forces' annual large-scale exercise, Tupolev Tu-95s fire cruise missiles. Russia is planning to deploy a new aircraft to replace the current strategic bomber from 2025. At the same time, the Tu-95MS is being modernized. In November 2015, the Russian Air Force began to receive Tu-95MSMs, with improved combat and radar and target-acquiring/radionavigation capabilities. The new Tupolev bomber is capable of carrying up to eight of the newest long-range cruise missiles, Kh-101 (conventional) or Kh-102 (250 kT nuclear, still in development). The bomber will remain in service until 2025. On November 17, 2016, the Tu-95MSM saw its first combat in Syria, launching Kh-101s in an air strike.

[Source]

Bukharin, Oleg et al. 2004: "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.382.

Gady, Franz-Stefan 2018: "Russia Conducts Large-Scale Exercise With its Nuclear Forces," *The Diplomat*, October 12, 2018. <https://thediplomat.com/2018/10/russia-conducts-large-scale-exercise-with-its-nuclear-forces/> (accessed May 31,2019)

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73–84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Podvig, Pavel 2012: "Modernization of Tu-95MS bombers," September 20, 2012. http://russianforces.org/blog/2012/09/modernization_of_tu-95ms_bombe.shtml (accessed May 31,2019)

Podvig, Pavel 2014: "Tupolev design bureau to work on new strategic bomber," February 18, 2014. http://russianforces.org/blog/2014/02/tupolev_design_bureau_to_work.shtml (accessed June 11,2018)

Podvig, Pavel 2017: "Strategic aviation," June 20, 2017. <http://russianforces.org/aviation/> (accessed May 27,2019)

Sputnik News 2012: "Russia Looking at 2020 for New Generation Long-Range Bomber," July 2, 2012. <http://sputniknews.com/military/20120702/174358197.html> (accessed June 11,2018)

Sputnik News 2014: "Russian Tu-95 Bear Bomber Launches Cruise Missiles During Drills," May 8, 2014. <http://sputniknews.com/military/20140508/189674387.html> (accessed June 11,2018)

TASS 2016: "Russia's Tupolev-95MSM bomber delivers first-ever strike on mission to Syria," November 17, 2016. <http://tass.com/defense/913163> (accessed June 1,2018)

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s) Strategic bomber Tu-160/M

Russian designation : Туполев Ту-160 'Белый лебедь'

NATO designation : Blackjack

Nuclear weapon : It carries 12 air-launched Kh-55SM cruise missiles, or 24 short-range Kh-15 attack missile gravity bombs.

Specifications : Length 54.1 m, Span 55.7–35.6 m

Max. speed : 2,200 km/h

Range : 14,000 km

Where deployed : Ukrainka Air Base

Remarks : The Russian nickname is the White Swan (Belyy Lebed). Russia began to modernize a dozen Tupolev Tu-160 from the mid-2000s. The Tu-160M, capable of carrying two new long-range cruise missiles, the Kh-101 (AS-23A, conventional warhead) and the Kh-102 (AS-23B, nuclear warhead), is an upgrade with greater firepower. Russia has replaced almost all its electronics, with a view to improvements in communications and avionics. The Tu-160M's maiden flight was in November 2014. A further modernized Tu-160M2 is expected to go into production in 2023. This series is reported to number 50 planes at a minimum. The new Tupolev's maiden flight was on January 25, 2018. On the same date, the Russian Air Force placed its purchase order for the first ten Tu-160M2s. PSC Tupolev is set to manufacture Russia's proposed next-generation stealth strategic bomber: Perspektivnyi Aviatsionnyi Kompleks Dal'ney Aviatsii (PAK DA) or "prospective aviation complex for long-range aviation." This first flight is projected for 2021. This new product is expected to replace Tu-160s, Tu-95MSs and Tu-22M3s.

[Source]

Bukharin, Oleg et al. 2004: "Russian strategic nuclear forces" edited by Pavel Podvig, 2004, MIT Press. p.397.

Gady, Franz-Stefan 2018-1: "Russia Orders First 10 Upgraded Supersonic Nuclear-Capable Bombers," *The Diplomat*, January 31, 2018. <https://thediplomat.com/2018/01/russia-orders-first-10-upgraded-supersonic-nuclear-capable-bombers/> (accessed May 31,2019)

Gady, Franz-Stefan 2018-2: "Russia Conducts Large-Scale Exercise With its Nuclear Forces," *The Diplomat*, October 12, 2018.

<https://thediplomat.com/2018/10/russia-conducts-large-scale-exercise-with-its-nuclear-forces/> (accessed May 31,2019)

Gady, Franz-Stefan 2019: "Russia's Next Generation Strategic Bomber to Make Debut Flight in 2025-26," *The Diplomat*, May 20, 2019.<https://thediplomat.com/2019/05/russias-next-generation-strategic-bomber-to-make-debut-flight-in-2025-26/> (accessed May 31,2019)

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Podvig, Pavel 2014-1: "Tupolev design bureau to work on new strategic bomber," February 18, 2014. http://russianforces.org/blog/2014/02/tupolev_design_bureau_to_work.shtml (accessed May 31,2019)

Podvig, Pavel 2014-2: "Plans for the new strategic bomber," May 22, 2014. http://russianforces.org/blog/2014/05/plans_for_the_new_strategic_bo.shtml (accessed May 31,2019)

Podvig, Pavel 2015-1: "Tu-160 bombers to undergo another round of modernization by 2019," May 27, 2015. http://russianforces.org/blog/2015/05/tu-160_bombers_to_undergo_anot.shtml (accessed May 31,2019)

Podvig, Pavel 2015-2: "Russia wants to build 50 new Tu-160 bombers," May 28, 2015. http://russianforces.org/blog/2015/05/russia_wants_to_build_50_new_t.shtml (accessed May 31,2019)

Podvig, Pavel 2017: "Strategic aviation," June 20, 2017. <http://russianforces.org/aviation/> (accessed May 27,2019)

RUSSIAN AVIATION 2014: "The upgraded Tu-160 performed its first flight," November 27, 2014. <http://www.ruaviation.com/news/2014/11/27/2767/> (accessed May 27,2019)

Sputnik News 2015: "Russia to Produce Successor of Tu-160 Strategic Bomber After 2023," June 4, 2015. <https://sputniknews.com/military/201506041022954769/> (accessed May 31,2019)

TASS 2017: "Russia will start making prototype model of future strategic bomber shortly – senator," December 24, 2017. <http://tass.com/defense/982771> (accessed May 31,2019)

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t) **Ground-based non-strategic nuclear weapons**

Russian designation (NATO designation)	Yield (kt)	Range (km)	Launch platform
Anti-ballistic missile			
53T6 (Gazelle)	10	80	Silo
Air defense missile			
S-300P (SA-10/20)	?	200/400	Transporter erector launcher
S-300V (SA-12)	?	100	Transporter erector launcher
Coastal defense missile			
Redut (SSC-1B)	350	500	Transporter erector launcher
Bostion-P (SSC-5)	10	350	Transporter erector launcher
Short-range ballistic missile			
Tochka/-U (SS-21)	10-100	120	Transporter erector launcher
Iskander (SS-26)	10-100	350	Transporter erector launcher
Cruise missile			
9M729 (SSC-8)	10-100	~2,500	Transporter erector launcher

[Source]

FAS: "Iskander / SS-26," <http://www.fas.org/nuke/guide/russia/theater/ss-26.htm> (accessed May 27,2019)

IHS Jane's 2015-1: "A-30 (SH-08 'Gazelle')," *IHS Jane's Weapons: Strategic 2015-2016*, pp.261-262.

IHS Jane's 2015-2: "Iskander 9M720/9M723 Tender," *IHS Jane's Weapons: Strategic 2015-2016*, pp.80-82.

IHS Jane's 2015-3: "OTR-21 Tochka (SS-21 'Scrab'/97M79)," *IHS Jane's Weapons: Strategic 2015-2016*, pp.82-85.

Kristensen, Hans M. 2012: "Non-Strategic Nuclear Weapons,"; Federation of American Scientists, Special Report No. 3, May, 2012. https://fas.org/_docs/Non_Strategic_Nuclear_Weapons.pdf (accessed May 31,2019)

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Missile Defense Project 2018: "S-400 Triumph," *Missile Threat*, Center for Strategic and International Studies, June 15, 2018. <https://missilethreat.csis.org/defsys/s-400-triumph/> (accessed May 31,2019)

Missile Defense Project 2019: "SSC-8 (Novator 9M729)," *Missile Threat*, Center for Strategic and International Studies, January 23, 2019, <https://missilethreat.csis.org/missile/ssc-8-novator-9m729/> (accessed May 31,2019)

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u) **Sea-based non-strategic nuclear weapons**

Russian designation (NATO designation)	Yield (kt)	Range (km)	Launch platform
Anti-ship cruise missile			
P-120 Malakhit (SS-N-9)	200	110	Corvette
P-500 Bazalt (SS-N-12)	350	550	Cruiser
P-700 Granit (SS-N-19)	500	625	Nuclear submarine, Aircraft carrier, Cruiser
Kh-41 Moskit (SS-N-22)	200	250	Destroyer, Corvette
Land-attack cruise missile			
RK-55 Granat (SS-N-21)	200	2,400	Nuclear submarine
Kalibr (SS-N-30A)	?	1,500-2,500	Nuclear submarine
Anti-submarine rocket			
RPK-2 Vyuga (SS-N-15)	200	35	Nuclear submarine, Cruiser, Destroyer, etc.
RPK-6 Vodopad (SS-N-16)	200	50	Nuclear submarine, Cruiser, Destroyer, etc.
Torpedo			
			Nuclear submarine
Depth charge			
			Aircraft carrier, Cruiser, Destroyer, etc.

[Source]

IHS Jane's 2015-1: "P-50/-120 (SS-N-9 'Siren'/4K85 Malaxit)," *IHS Jane's Weapons: Strategic 2015-2016*, p.196.

IHS Jane's 2015-2: "P-80/-270 Zubr/Moskit (SS-N-22 'Sunburn'/3M-80/3M82)," *IHS Jane's Weapons: Strategic 2015-2016*, pp.197-198.

IHS Jane's 2015-3: "P-500 (4K80 Basalt)," *IHS Jane's Weapons: Strategic 2015-2016*, pp.198-199.

IHS Jane's 2015-4: "P-700 (3M45)," *IHS Jane's Weapons: Strategic 2015–2016*, pp.199–200.

IHS Jane's 2015-5: "RK-55 Granat (3M410)," *IHS Jane's Weapons: Strategic 2015–2016*, pp.200–201.

IHS Jane's 2015-6: "RPK-2 (81R Vyuga/90RU Tsakra)," *IHS Jane's Weapons: Strategic 2015–2016*, pp.235–236.

IHS Jane's 2015-7: "RPK-6/-7," *IHS Jane's Weapons: Strategic 2015–2016*, pp.236–237.

Kristensen, Hans M. 2012: "Non-Strategic Nuclear Weapons,;" Federation of American Scientists, Special Report No. 3, May, 2012. https://fas.org/_docs/Non_Strategic_Nuclear_Weapons.pdf (accessed May 31,2019)

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Missile Defense Project 2018: "SS-N-30A (3M-14 Kalibr)," *Missile Threat*, Center for Strategic and International Studies, June 15, 2018, <https://missilethreat.csis.org/missile/ss-n-30a/> (accessed June 1,2019)

Sutyagin, Igor 2012: "Atomic Accounting: A New Estimate of Russia's Non-Strategic Nuclear Forces," Royal United Services Institute, November 2012. https://rusi.org/sites/default/files/201211_op_atomic_accounting.pdf (accessed June 1,2019)

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v)

Air-carried non-strategic nuclear weapons

Russian designation (NATO designation)	Yield (kt)	Range (km)	Launch platform
Anti-ship cruise missile			
Kh-22 (AS-4)	200	310	Tu-22M
Kh-32	100-500	600-1,000	Tu-22M
Ballistic missile			
Kh-15 (AS-16)	350	150	Medium-range bomber
Kh-47M2 (Kinzhal)	?	1,500-2,000	MiG-31K
Unguided bomb	20–1,000		Medium-range bomber, Fighter-bomber

[Source]

IHS Jane's 2015-1: "Kh-15 (As-16 'Kickback'/RKV-15)," *IHS Jane's Weapons: Strategic 2015–2016*, pp.177–178.

IHS Jane's 2015-2: "Kh-22 (AS-4 'Kitchen'/Burya)," *IHS Jane's Weapons: Strategic 2015–2016*, pp.178–179.

IHS Jane's 2015-3: "Russian Federation/Nuclear bombs," *IHS Jane's Weapons: Strategic 2015–2016*, pp.225–226.

Kristensen, Hans M. 2012: "Non-Strategic Nuclear Weapons,;" Federation of American Scientists, Special Report No. 3, May, 2012. https://fas.org/_docs/Non_Strategic_Nuclear_Weapons.pdf (accessed May 31,2019)

Kristensen, Hans M. & Korda, Matt 2019: "Russian nuclear forces, 2019," *Bulletin of the Atomic Scientists*, 75:2, 73-84, <https://doi.org/10.1080/00963402.2019.1580891> (accessed May 15,2019)

Missile Defense Project 2018: "Kinzhal," *Missile Threat*, Center for Strategic and International Studies, July 18, 2018, <https://missilethreat.csis.org/missile/kinzhal/> (accessed June 1,2019)

Navy Recognition 2018: "New Kh-32 Antiship Missile Becomes Operational in Russia," March 26, 2018, <https://www.navyrecognition.com/index.php/focus-analysis/naval-technology/6088-new-kh-32-antiship-missile-becomes-operational-in-russia-part-1.html> (accessed June 1,2019)

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