

Sukhoi Su-34 Plane Nicknamed 'Duckling:' Russian Aerospace Force's Best Bomber

Defense-aerospace



While the Russian air force is gradually reviving its military capabilities, it still takes a fairly laid-back view to operational niceties and procedures, as visible here in the way weapons are haphazardly piled near this Su-34 Duckling bomber. (Tass photo)

The Chkalov Aircraft-Making Enterprise in Novosibirsk in west Siberia has rolled out the 100th Su-34 (NATO reporting name: Fullback) fighter-bomber, Deputy Prime Minister Dmitry Rogozin announced on his Facebook page on August 19.

The first contract for the delivery of Su-34 combat planes was signed with the Russian Defense Ministry in 2008. Four years later, the advanced fighter-bomber entered service with Russia's Aerospace Force.

As Commander-in-Chief of Russia's Aerospace Force Viktor Bondarev said earlier, the Su-34 will eventually replace Su-24 (Fencer) frontline bombers and Su-25 (Frogfoot) attack aircraft. The Russian Aerospace Force is expected to receive no less than 200 Su-34 fighter-bombers under the state armament program through 2020.

The Russian air task force is successfully using these warplanes in an operation in Syria against militants of the Islamic State (terrorist organization outlawed in Russia).

Why 'Duckling'?

The aircraft features a standard aerodynamic layout with an additional foreplane, a trapezoidal mid-wing, twin vertical tails, two AL-31F engines in the fuselage rear and tricycle landing gear. The crew comprises a pilot and a navigator sitting side by side in an armored cockpit. The cockpit can be accessed through a lower hatch by climbing the footsteps.

Commander of a Su-34 air wing, Captain Alexei Belonog who has logged almost a thousand flight hours and mastered four types of aircraft told TASS on the eve of Military Aviation Day that precisely the Su-34 fighter bomber was an indisputable favorite for him.

"And, by the way, it is pure truth that the advanced fighter-bomber is gently called the 'Duckling' in the troops due to its flat-shaped nose cone. I don't see anything bad in this," said Capt. Alexei Belonog.

The Su-34 is a favorite plane among many pilots as it features a spacious and comfortable cockpit and excellent flight characteristics. "Of course, it is not designed for aerobatics but it can also experience overloads of up to 7.5G [overloads experienced by pilots when they perform aerobatic maneuvers]," the pilot said.

Three in one

The Su-34 two-seat frontline bomber is capable of operating equally efficiently day and night and in any weather conditions. The Su-34 dubbed as Fullback under NATO classification is designed to deliver missile and bomb strikes against ground objectives and destroy an enemy's aerial targets.

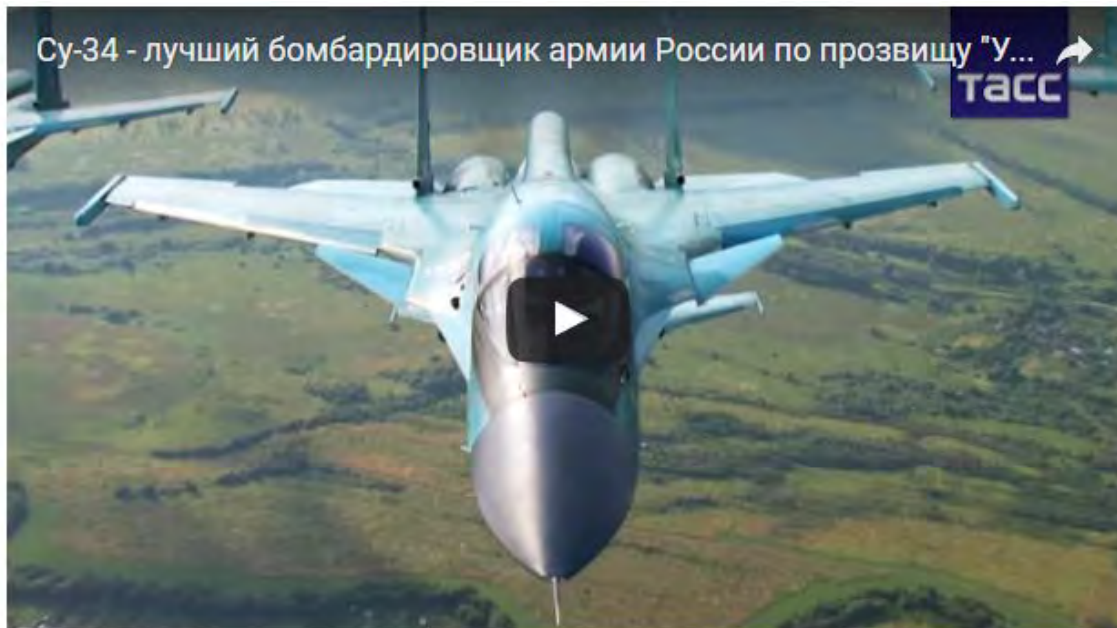
"The Su-34 is a unique machine. It incorporates as many as three planes: a fighter jet, an attack aircraft and a frontline bomber. The Su-34 can successfully fight any aerial objectives and effectively destroy ground and surface targets. Moreover, it can stay endlessly long in the air and this duration can only be limited by pilots' physical ability," said Viktor Litovkin, a TASS military observer.

The Su-34, which is a modified version of the Su-27 (Flanker) fighter aircraft, has been developed by the Sukhoi design bureau under the guidance of its chief designer Rollan Martirosov. The fighter bomber has been serial produced at the Novosibirsk-based Aircraft-Making Enterprise since 2006.

The Su-34 performed its debut flight in 1990 (the prototype aircraft T-10V-1 was piloted by USSR honored test pilot Anatoly Ivanov).

The Su-34 was developed for promptly redeploying it for missions from any parts of the country to its border to reliably seal off a possible armed conflict before the arrival of the main forces.

<https://www.youtube.com/watch?v=InJI1sLnUOE>



“Even before the plane entered service, a crew of test pilots from the Sukhoi design bureau performed a non-stop flight from Moscow to Sakhalin in the Russian Far East and back with aerial refueling, thus proving to all those in doubt that the fighter is capable of accomplishing any missions at the farthest distance from its home airfield,” said Viktor Litovkin.

All conditions have been created in the Su-34 for this. As compared to other fighter jets, the crew is accommodated side by side in the cockpit rather than one after the other.

“There is space between them where a mattress can be spread and one of the crewmembers can have a rest during a flight,” the military expert said. Besides, the space behind the pilots’ seats allows them to stand up to their full height.

All modern conveniences?”

“There is a microwave oven, an air conditioner, an electromassage system built into the pilots’ seats and even a bio toilet aboard the bomber. If you get to know that such arrangement can’t be found aboard not only fighter jets but also long-range bombers and even Ilyushin Il-76 military-transport planes, then you can only be surprised once again at the uniqueness of the Su-34,” Viktor Litovkin noted.

The Su-34 is capable of flying in the auto pilot mode at extremely low altitudes, skirting the terrain. In Litovkin’s opinion, none of the fighter jets in the world, including the well-advertised US F-22 and F-35 aircraft, can feature “these capabilities.”

The available second radar for observing the rear hemisphere is also the plane’s unique feature: the system will warn the crew of a threat and can retaliate with a salvo of missiles to an attempt by an enemy’s aircraft “to strike in the back.”

Plane’s characteristics

According to data from open sources, the Su-34 is 23.3 meters long and 6.4 meters high and has a wing span of 14.7 meters. The plane has a service ceiling of 14,650 meters and a flying range of 4,500 kilometers without refueling and 7,000 kilometers with refueling. The Su-34 fighter bomber has a mission radius of up to 1,100 km. The plane has a take-off weight of 45.1 tons and a combat load weight of 8 tons. The plane can develop a speed of up to 1,900 km/h.

The Su-34 is armed with a 30mm gun and its 12 hard points can carry various types of air-to-air and air-to-surface aircraft-launched missiles, rockets and air bombs.

Foreign customers' interest

The interest of foreign customers in Russian planes, especially Su-34 fighter bombers, has increased after the Russian air task force's operation in Syria. In particular, this interest has been displayed by some countries in the Middle East.

"No doubt, the interest has increased. I want to say that dozens of [state arms exporter] Rosoboronexport's delegations are on foreign trips every week and there is a very intensive process of negotiations with countries of the Middle East, Africa, Latin America, Asia and so forth," said Sergei Goreslavsky Rosoboronexport deputy CEO.

In 2015, Rosoboronexport initiated the preparation of an export configuration certificate for the Su-34. In 2016, an expected contract with Algeria may be signed on the delivery of frontline bombers.

Negotiations on this issue are already under way and have progressed while a contract has not been signed yet.

"The Algerian side has long expressed its desire to buy Su-34 planes but there was no export configuration certificate for this machine before. Now it is available. I believe the contract will surely be signed in mid-2016 or before the end of the year," said a source in the defense industry.

Geography of use

Russia's Su-34 planes accomplished combat missions for the first time during the war in South Ossetia in 2008. The fighter bombers were used to provide cover for attack aircraft, conducting electronic warfare against Georgian air defense systems with the use of the Khibiny jamming station.

The Su-34 fighter bombers conducted jamming from the warplanes' combat formations, preventing Georgian air defense systems from successful jammer out-tuning, and also destroyed a key radar near Gori by an anti-radar missile.

Since 2015, the Su-34 fighter-bomber has been frequently shown in video footage on television channels reporting about the Russian air task force's operation in Syria. Military specialists, numerous experts and analysts watch with interest its successful performance.

Su-34 planes flew sorties not only with OFAB-500 and adjustable KAB-500 air bombs but also with air-to-air short- and medium-range missiles.

The Su-34's weapons suite includes R-73 (NATO reporting name: AA-11 Archer) short-range and R-27 (AA-10 Alamo) medium-range air-to-air missiles.

The Su-34 fighter-bomber can carry up to six R-73 missiles in launchers placed at the aircraft's wingtips or under the wings and up to eight R-27 missiles that can be mounted on ejector racks or launchers both under the wing and on under-fuselage hard points.

The Su-34 planes were used for the first time in the spring of 2016 to eliminate ice jams. Their mission caused the largest flooding in the past 20 years on the Severnaya Dvina River in the Vologda and the Arkhanglesk Regions. The bombers performed two sorties each, dropping eight bombs with a total weight of 4 tons.

On August 16, the Su-34 fighter-bombers took off for the first time from Iran's Hamadan airfield to deliver a strike against militants in Syria. The sortie also involved Russian Tupolev Tu-22M3 long-range bombers. They dealt a blow against the objectives of the Islamic State and Jabhat al-Nusra groupings (terrorist organizations outlawed in Russia) in the Syrian provinces of Aleppo, Deir ez-Zor and Idlib.