

Su-30MK2 Multi-Role Fighter Aircraft, Russia

Airforce-Technology



The Su-30MK2 multi-role fighter aircraft is an improved version of the Su-30MKK, a member of the Su-30 aircraft family. The multi-role variant offers enhanced combat capabilities against aerial, ground and sea-based targets.

The aircraft was developed by Sukhoi in 2002 and is manufactured by Komsomolsk-on-Amur Aircraft Production Association (KnAAPO). The aircraft are operational with Vietnam, Indonesia, Uganda, Venezuela and China.

The Su-30MK2 combat aircraft offers superior manoeuvrability and can be deployed to engage manned and unmanned aerial vehicles (UAVs), medium- and short-range guided missiles, high-precision munitions, and other airborne weapons. It can also be used in aerial reconnaissance and training missions.

Su-30MK2 design and features

The Su-30MK2 fighter aircraft features reinforced airframe and a tricycle landing gear. It is capable of engaging targets in all weather conditions during day and night.

It has a length of 21.9m, a height of 6.4m and wing-span of 14.7m. The maximum and limit take-off weights are 34,500kg and 38,000kg respectively, and the payload carrying capacity is 8,000kg.

The Su-30MK2 is fitted with an in-flight refuelling system for extended flight range. The open architecture of the aircraft allows for installation of a variety of combat equipment and an improved avionics suite.

Cockpit and avionics of Su-30MK2

The digital glass cockpit accommodates two crew members in tandem configuration. It is equipped with new colour multi-functional, digital LCD screens for displaying flight and navigation information and graphical data. It also incorporates electromechanical indicators and advanced navigation and radio communications.

The aircraft is also fitted with an infrared search-and-tracking (IRST) system, a helmet-mounted target designation system, teplopelengator, laser range-finder and a target designator for detection and tracking of air and ground targets. The optoelectronic sighting systems provide improved surveillance capabilities.

The airborne radar aboard the Su-30MK2 is capable of searching and designating aerial targets, as well as short and medium-range guided missiles. It is also used to measure coordinates of ground-based radio-contrast targets.

Armament fitted to the Sukhoi fighter aircraft

The Su-30MK2 combat aircraft is attached with 12 hardpoints under the wings and fuselage to carry a range of missiles, bombs and rockets. It also integrates a built-in, 30mm GSh-301 automatic, single-barrelled gun with 150 rounds of ammunition.

A number of guided and unguided weapons are also fitted to the aircraft to destruct surface targets. The guided weapons fitted for air-to-ground operations include Kh-31A high-speed, medium-range anti-ship airborne missile, Kh-31P high-speed, medium-range air-to-surface guided missile, Kh-59ME air-to-surface weapon, Kh-35E anti-ship unified guided missile, Kh-59MK airborne enhanced-range air-to-surface guided missile, X-29L (with semi-active laser guidance) / X-29TE (with passive TV guidance) air-to-surface missiles, and KAB-500KR electro-optical television-guided bomb.

The unguided weapons package constitutes 100kg, 250kg and 500kg aerial bombs and single cluster bombs as well as C-8, C-13 and C-25-RPM rockets.

The medium-range air-to-air missiles carried by the Su-30MK2 include R-27T1, R-27ET1 with infrared homing, R-27R1, R-27ER1 with semi-active radar homing, R-27P1, R-27EP1 with passive IR homing, RVV-AE with active radar homing, and R-73E with all-aspect IR passive homing.

Engine and performance

The Su-30MK2 multi-role combat aircraft is powered by two AL-31F high-temperature double-circuit turbojet engines, which generate a thrust of 12,500kgf each.

The aircraft can fly at a maximum speed of 2,100km/h, with a horizontal speed of 1,400km/h. The unrefuelled range of the fighter is 3,000km. The in-flight refuelling system provides a flight range of up to 5,600km. The maximum altitude of the aircraft is 17,300m.

Su-30MK2 orders and deliveries

The Indonesian Government placed an order for three Su-30MK2 fighter aircraft in July 2007 for use by the Indonesian Air Force. The aircraft were delivered by January 2009.

Russian state-owned arms export agency Rosoboronexport signed a \$470m contract with the Indonesian Ministry of Defence for the supply of six Su-30MK2s in December 2011. The first two aircraft were delivered in February 2013 followed by the third and fourth fighters in May 2013. The Indonesian Air Force received the remaining two aircraft in September 2013.

In January 2009, Rosoboronexport signed approximately \$500m worth contract with Vietnam for the delivery of eight Su-30MK2 aircraft to the Vietnam People's Air Force. Vietnam ordered for an additional 20 fighters in July 2010. The first batch of four aircraft was delivered in June 2011. A contract for a further 12 aircraft was signed in August 2013. The last two aircraft were delivered by the first half of 2016.

Uganda placed an order with Rosoboronexport for six Su-30MK2 fighters for use by the Uganda Peoples Defence Force (UPDF), in April 2010. The first two aircraft were delivered in July 2011. The third and fourth were delivered in November 2011, followed by the final two aircraft in May 2012.

In July 2006, Russia signed a \$1bn contract with Venezuela for the supply of 24 Su-30MK2 aircraft to the Venezuelan Air Force. The first two aircraft were delivered in November 2006.

China received 24 Su-30MK2s with maritime strike capabilities in August 2004. These aircraft currently are being operated by the People's Liberation Army Naval Air Force.