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## Induction of French Rafale Aircrafts in IAF

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### Why in News

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Recently, **Indian Air Force** (IAF) has received its **first batch (5 out of 36)** of French Rafale aviation combat aircraft at Ambala Air base (Haryana).

- The Rafales are **India's first major acquisition of fighter planes in 23 years** after the **Sukhoi jets** were imported from Russia.
- All the 36 jets will be delivered to India by the **end of 2021**.

# IAF receives Rafale boost

India has received its first batch of five Rafale jets

The jets — 3 single-seat & 2 twin-seat — will be stationed at Ambala airbase



Rafale is a twin-engine multi-role combat aircraft



DEVELOPED BY  
FRENCH AIRCRAFT  
MANUFACTURER  
DASSAULT

## Specifications



Top speed:  
2,223km/h



Max weight:  
24,500kg



Range:  
3,700km



Load-carrying capacity: 9,500kg

## CAPABLE OF

- Ground support
- Aerial reconnaissance
- In-depth strikes
- Interception
- Nuclear deterrence

Rafales

- Introduced in 2001, the Rafale is a **French twin-engine** and **multirole fighter aircraft designed and built by Dassault Aviation** being produced for both the French Air Force and for carrier-based operations in the French Navy.
- India has inked a Rs 59,000-crore deal in **2016 to procure 36 Rafale jets from French aerospace major Dassault Aviation** after a nearly seven-year exercise to procure 126 Medium Multi-Role Combat Aircraft (MMRCA) for the Indian Air Force did not fructify.
  - The MMRCA deal was stalled due to disagreements over production in India.
  - In comparison to the earlier deal i.e. MMRCA, Rafale has much technological advancement, lower life cycle cost and specifications according to the warfare needs of India.

## Specification

- **Air Supremacy:** Equipped with a wide range of weapons, the Rafale is intended to perform air supremacy, interdiction (act of disrupting), aerial reconnaissance (observation to locate an enemy), ground support, in-depth strike, anti-ship strike and nuclear deterrence missions.
- **Wide Range of Weapons: Meteor missile, Scalp cruise missile and MICA weapons system** will be the mainstay of the weapons package of the Rafale jets.
  - **Meteor:** It is the next generation of **Beyond Visual Range (BVR) air-to-air missile** (BVRAAM) designed to revolutionise air-to-air combat.
 

The Meteor missile can target enemy aircraft from 150 km away. It can destroy enemy aircraft before they actually even get close to the Indian aircraft.
  - **SCALP Cruise Missiles:** It can **hit targets 300 km away.**
  - **MICA Missile System:** It is a very **versatile air-to-air missile.** It comes with a radar seeker and can be fired for the short-range to long-range as well right up to 100 km.
 

It's already in service with the IAF i.e. Mirages and is the primary weapon system of Rafales as well.
- **Air to Air Target:** The ability to strike **air-to-air targets** from up to 150 km away and safely hit land targets 300 km within enemy territory make them some of the deadliest fighter jets flying in the world.
- **Flight Hours:** The aircraft has 30,000 **flight hours in operations.**

## Key Points

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- **Significance For India:**

- **Joint Strategic Vision:** The Rafale would be an aid to **the Joint Strategic Vision of India-France Cooperation** in the **Indian Ocean Region** to curb over-flights and the threat of weapons of mass destruction in the area.
- **Upgradation of Air Combat Capabilities:** It will significantly **bolster India's air combat capabilities** especially when it is facing **hostile neighbours like Pakistan and China.**
- **Unmatched Capabilities:** The aircraft proved its **unmatched capabilities** in air combat missions in **Afghanistan, Libya, Mali, Iraq and Syria** in the last few years.
  - **India is the fourth country** to have the strategic platform with Rafale after France, Egypt and Qatar.
  - The Indian Air Force is also in the process of procuring a new generation medium-range modular air-to-ground **weapon system Hammer** to integrate with the Rafale jets. The **Hammer (Highly Agile Modular Munition Extended Range)** is a precision-guided missile developed by French defence major Safran.
- **Game Changer:** Rafales could be a **game-changer for India after all the 36 jets join the Indian Air Force** as no aircraft in possession of any country in the neighbourhood will be able to match their superior kinematic performance and powerful electronic warfare systems.

The Rafale jet is **often compared with the USA stealth F-35** aircraft and F-22.
- **Border Clash with China:** It is much more advanced and lethal than the current fighter aircraft **available with China i.e.jet J-20.** Therefore, it is definitely a boost to **India's defence preparedness** especially at the **times of border clash with China.**

- **Related Concerns:** The induction of Rafale aircraft will be a game changer in many ways, however, it may not make up for the **challenges faced by the Indian Air Force** in near future:
  - **IAF's Depleting Strength of Fighter Jets:** The **emergency acquisition was made primarily to check the depleting combat capability** of the IAF as the number of its fighter squadrons had come down to a worrying 31 against the authorised strength of at least 42.
    - At present, its **fleet comprises 30 squadrons of fighter jets**.
    - Therefore, **one of main focus areas is to build up the authorised strength** of fighter squadrons at the earliest.
  - **Increasing Potential of Hostile Neighbours:** By 2023 the Pakistan Air Force will have 27 fighter squadrons while China's PLA Air Force is assessed to have the capacity to bear at least 42 squadrons against India.
 

Hence, India can **not lose sight of the developments in the North and West**, with both the adversaries i.e. China and Pakistan are continuously **increasing and upgrading their inventories**.
  - **Two Front Challenge:** Even though the IAF desires a strength of 45 fighter squadrons for a **two-front challenge ( War with China and Pakistan)**, the last time it had its authorised complement of 42 squadrons was in 2002 after the terror attack on Parliament.
 

Since then, the **numbers have steadily fallen**, and the trend will continue with five squadrons of old Russian MiG aircraft getting decommissioned subsequently.
  - **Delay of Supplies:** The IAF has planned to **procure Light Combat Aircraft (LCA) Mk I and MK II from Hindustan Aeronautics Limited (HAL)**. However, the supplies from HAL are behind the scheduled induction plan.
 

Similarly, IAF **issued a request for information for 114 multirole fighters in June 2018 to foreign manufacturers** i.e. Boeing, Lockheed Martin, Airbus Defence and Space, Russian Aircraft Corporation and Sukhoi Company. It plans to induct the aircraft within 12 years of the contract. However a request for proposal is awaited.
  - **Issues with Russia:** The **12 Su-30MKIs, lost in accidents, are also being replenished by HAL through a contract with Russia**, which has been approved by the government.
 

However, the **Russian connection is also limited** as the IAF had earlier pulled out of the collaborative venture with Sukhoi to develop the **Fifth Generation Fighter Aircraft (FGFA)** after 11 years, citing disagreements over cost sharing plans, technology transfers and the test aircraft's technological capabilities.

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- Assimilation of Rafale has the capability to boost the defence sector of India. For the same there is need for the **constant dialogue mechanism** between India and France to further enhance its strategic and military ties.
  - Meanwhile, India must **procure 21 MiG-29 aircraft from Russia** which would be inducted into service as an additional squadron. Along with the same, IAF must strive towards replenishing the old fighter aircrafts.
  - The fitting of **additional India-specific enhancements in Rafale** is a necessary aspect which must be done through exchange of technological intervention with France.

**Source: IE**