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THE **OMNIROLE** FIGHTER ●



AVANT GARDE

Which combat aircraft can offer your armed forces the best purely military solution for the next twenty-five years ? And at the least cost ? And with the fewest strings attached ? The answer is Rafale. Rafale is not a cold-war artifact, designed to carry out a single task supremely well. Instead, Rafale is the only late-generation fighter carefully designed to carry out the full spectrum of combat assignments—air-defense, air dominance, deep strike attack, maritime interdiction, ground support, reconnaissance, and more. Alone in its class, Rafale is designed to carry out several missions simultaneously. This explains why Rafale has replaced no fewer than six different combat aircraft types in French inventory. Unlike certain “silver bullet” fighters, Rafale is fully operational with the latest generation of weapon systems and technologies. Unlike certain rivals, Rafale’s advanced flight control systems and demonstrated flight envelope confer air superiority advantages that are years ahead of any potential adversary. Unlike certain competitors, Rafale is an inherently low-observable aircraft. Rafale offers the best ratio of pure combat effectiveness to cost in the world today. It stands proudly at the avant garde of contemporary combat aircraft design.



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OMNIROLE

Rafale is not a "multi-role" or "swing-role" aircraft. These are becoming obsolete terms which correspond to competing systems with competing visions of the future. Rafale is the first omnirole aircraft.

By design, it is able to carry out different complex combat assignments at the same time. This concept means Rafale is technologically in a class of its own. Rafale's systems are more cohesively integrated than those aboard competing aircraft. The way information is integrated is more highly refined. The way workloads are distributed is more effective. The manner in which the aircraft can be operationally configured is richer and more flexible. The aircraft's stealth characteristics are the result of inherent design choices, not tardy afterthoughts. Rafale offers military planners a single, affordable tool capable of meeting diverse mission requirements. Rafale makes it possible for air forces to meet multiple contingencies without assuming the costly burden of a multiple-aircraft air force. Rafale offers greater operational latitude to political decision-makers.

'Fast Pack' conformal fuel tanks enhance Rafale's omnirole capabilities and operational flexibility.







POWER

Rafale is equipped with the most technologically advanced jet engine ever designed for a combat aircraft. The M-88 is not an "off-the-shelf" adjunct to a separately conceived airframe. The M-88 is a key and integral component in the global Rafale concept, carefully engineered to confer reliable and flexible propulsion across the full range of Rafale's performance envelope. The M-88/Rafale combination offers the best balance and ratio of thrust/weight/performance offered aboard any aircraft in its class in the world today. Indeed, equipped with the standard 7.5-ton thrust version of the M-88, Rafale is capable of transporting up to 140% of its empty-mass weight in ordnance payload, a figure unmatched by any current or planned rival aircraft. But like Rafale itself, the M-88 has been conceived to offer significant performance growth potential. Thanks to its modular design, the M-88 is now available with an enhanced 9-ton thrust rating. This means Rafale is available with a propulsion package that delights pilots and exceeds the formal military thrust requirements of air force procurement staffs worldwide.



*Strength to strength.
Rafale builds on the Dassault tradition of
commitment to low life-cycle costs and high
dispatch reliability.*

VALUE

Rafale has been engineered not just to guarantee supremacy in the air, it has been engineered to achieve supremacy affordably, over the full duration of its service lifetime.

By design, Rafale is easier and less costly to maintain than any current or proposed rival aircraft, and significantly cheaper than cold-war pedigree aircraft now being promoted as "late-generation" Rafale competitors.

Rafale's open-architecture/open-systems design philosophy is one important source of lifetime cost-savings.

Systems evolution will be simpler and less costly due to Rafale's extensive modularity, and the key fact that the Rafale airframe design is perennial. Rafale will undergo none of the expensive upsizing so prominent on cold-war vintage combat aircraft programs. Reduced maintenance is another key parameter for calculating the true life-cycle costs of a combat aircraft system. Rafale's advanced modular design minimizes aircraft downtime, requires fewer ground crew, and maximizes dispatch reliability.

From Desert Storm to Kosovo, Dassault combat aircraft have established a record of 100% operational availability. Rafale builds on that achievement, but also offers the key advantage of a design concept that shrinks the global lifetime investment cost of a credible airborne deterrent force.



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BRAINS

Rafale is more than just an aircraft. Its pilot is more than just a pilot. Rafale is a sophisticated weapon system that relies on new ways of integrating pilot, control, and information into a seamless whole. Flying the Rafale is a unique experience, qualitatively different from flying any other aircraft. Rafale's fully operational two-seat cockpit configuration, unique among competing aircraft in this category, distributes workload in a way that allows pilot and mission specialist to fly the mission, not just the aircraft. This is a key component of Rafale's ability to perform multiple missions simultaneously.

Rafale's advanced control and communication systems means the aircraft can perform autonomously or in networked mode. Rafale's advanced radar and Spectra ECM suite cue pilot and mission specialist with critical real-time data channeled through an interface that has won the praise of more than 80 seasoned combat pilots from around the world. All features are inherent to Rafale's avionics/CBI package, and are permanently on-line and available without the need to reconfigure on the ground. Rafale's unique man/machine interface confers the advantage where it counts most: pure mission effectiveness and survivability.

Invited to test-fly the Rafale, combat fighter pilots from around the world have applauded Rafale's advanced man-machine interface.





CHOICE

Rafale's open-systems architecture and philosophy encompass the customer's absolute freedom to select appropriate and affordable armament systems. It's why Rafale acquirers will never be locked into proprietary, custom-configured weapons developed exclusively for Rafale, or by just one national source. Rafale has been designed to accommodate all present and future NATO weapons systems. Significantly, however, Rafale is the single combat aircraft in its class already designed to operate next-generation systems like Scalp EG and AASM. Rafale acquirers will always enjoy guaranteed access and technical compatibility with the weaponry of their choice. With Rafale, interoperability is ensured.





INDEPENDENCE

Acquisition of an advanced combat aircraft is a complex process, all too often complicated by political barriers governing transfer of technology and access to key weapon systems, spare parts, and know-how. But unlike certain rival systems, Rafale is not delivered 'stripped' of key systems or compatibility with vital weapon technologies. Rafale is marketed under the rules of a single nation and a single industrial partnership consortium. This is not the case with competing combat aircraft systems, developed and marketed by nations or organizations inherently restricted by contradictory policy constraints. Unlike certain rivals, Rafale comes with as large a technology transfer package as the customer's national industry can absorb. Unlike certain rivals, Rafale is operational and acquirable immediately. Unlike competing aircraft, which may meet certain key criteria, only one aircraft can meet and surpass the full spectrum of your mission requirements. Avant garde. Omnirole. Affordable. Ready for your air force. Today. Rafale.



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