Tornado IDS [A-200A] - 1992

Italy



Type: Attack
Min Speed: 350 kt
Max Speed: 920 kt
Commissioned: 1992
Length: 16.7 m
Wingspan: 13.9 m
Height: 5.95 m
Crew: 2
Empty Weight: 14090 kg
Max Weight: 28000 kg
Max Payload: 9000 kg
Propulsion: 2x RB.199-34R Mk.103

Sensors / EW: - Tornado Nose Radar (TNR) [TFR & GMR] - Radar, Radar, FCR, Air-to-Surface, Short-Range, Max range: 74.1 km
- ELT-553 - ECM, DECM, Defensive ECM, Max range: 0 km
- ARWE - (Tornado, Italy) ESM, RWR, Radar Warning Receiver, Max range: 222.2 km

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Weapons / Loadouts:
- BOZ-102 Chaff/Flare Pod - Sensor Pod.
- AS.34 Kormoran 1 - (1978) Guided Weapon. Surface Max: 55.6 km.
- AIM-9L Sidewinder - (1980) Guided Weapon. Air Max: 18.5 km.
- 1500 liter Drop Tank - Drop Tank.
- Mk82 500lb LDGP - (1954) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- Mk83 1000lb LDGP - (1954) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- BL.755 No.1 CB [147 x GP Anti-Armor Bomblets] - (1973) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- Mk20 Rockeye II CB [247 x Mk118 Dual Purpose Bomblets] - (1969, Mk7 Dispenser) Bomb. Surface Max: 1.9 km. Land Max: 1.9 km.
- AGM-88B HARM - (1990) Guided Weapon. Surface Max: 129.6 km. Land Max: 129.6 km.
- MW-1 Anti-Runway Dispenser [100 x Runway Penetrators + 336 x Area Denial Mines] - (1988) Dispenser. Land Max: 1.9 km.
- MW-1 Anti-Armour Dispenser [2268 x Anti-Tank + 336 Anti-Personnel] - (1985) Dispenser. Land Max: 1.9 km.
- AGM-65D Maverick IR - (1984) Guided Weapon. Surface Max: 14.8 km. Land Max: 14.8 km.

OVERVIEW: The Panavia Tornado is a family of twin-engine, variable-sweep wing combat aircraft, which was jointly developed and manufactured by Italy, the United Kingdom, and West Germany. There are three primary Tornado variants: the Tornado IDS (interdictor/strike) fighter-bomber, the suppression of enemy air defences Tornado ECR

(electronic combat/reconnaissance) and the Tornado ADV (air defence variant) interceptor aircraft.

DETAILS: The Tornado was developed and built by Panavia Aircraft GmbH, a tri-national consortium consisting of British Aerospace (previously British Aircraft Corporation), MBB of West Germany, and Aeritalia of Italy. It first flew on 14 August 1974 and was introduced into service in 1979-1980. Due to its multirole nature, it was able to replace several different fleets of aircraft in the adopting air forces. The Royal Saudi Air Force (RSAF) became the only export operator of the Tornado in addition to the three original partner nations. A tri-nation training and evaluation unit operating from RAF Cottesmore, the Tri-National Tornado Training Establishment, maintained a level of international co-operation beyond the production stage.

The Panavia Tornado is a multirole, twin-engined aircraft designed to excel at low-level penetration of enemy defences. The mission envisaged during the Cold War was the delivery of conventional and nuclear ordnance on the invading forces of the Warsaw Pact countries of Eastern Europe; this dictated several significant features of the design. Variable wing geometry, allowing for minimal drag during the critical low-level dash towards a well-prepared enemy, had been desired from the project's start. Advanced navigation and flight computers, including the then-innovative fly-by-wire system, greatly reduced the workload of the pilot during low-level flight and eased control of the aircraft. For long range bombing missions, the Tornado has a retractable refuelling probe.

As a multirole aircraft, the Tornado is capable of undertaking more mission profiles than the anticipated strike mission; various operators replaced multiple aircraft types with the Tornado as a common type - the use of dedicated single role aircraft for specialist purposes such as battlefield reconnaissance, maritime patrol duties, or dedicated electronic countermeasures (ECM) were phased out - either by standard Tornados or modified variants, such as the Tornado ECR. The most extensive modification from the base Tornado design was the Tornado ADV, which was stretched and armed with long range anti-aircraft missiles to serve in the interceptor role.

The Tornado operators have chosen to undertake various life extension and upgrade programmes to keep their Tornado fleets as viable frontline aircraft for the foreseeable future. The RAF and RSAF have upgraded their Tornados to the GR4 standard to increase combat effectiveness, while German Tornados have been undergoing periodic upgrades under the multi-stage ASSTA (Avionics System Software Tornado in Ada) programme. With these upgrades, as of 2011, it is projected that the Tornado shall be in service until 2025, more than 50 years after the first prototype took flight.

TYPE: Multirole Aircraft || Strike Aircraft.

SPECIFICATIONS: Crew: (2) || Length: 16.72 m (54 ft 10 in) || Wingspan: 13.91 m at 25 degree wing sweep, 8.60 m at 67 degree wing sweep (45.6 ft / 28.2 ft) || Height: 5.95 m (19.5 ft) || Max. takeoff weight: 28,000 kg (61,700 lb) || Powerplant: (2) Turbo-Union RB199-34R Mk 103 afterburning turbofans || Dry thrust: 43.8 kN (9,850 lbf) each || AB Thrust: 76.8 kN (17,270 lbf) each.

PERFORMANCE: Maximum speed: Mach 2.2 (2,400 km/h, 1,490 mph) || Range: 1,390 km (870 mi) typical combat || Service ceiling: 15,240 m (50,000 ft) || Rate of climb: 76.7 m/s (15,100 ft/min) || Thrust/weight: 0.55.

SENSORS: Combined Navigation/Attack Doppler Radar || AI.24 Foxhunter || Link 16 JTIDS || Emitter-Locator System (ELS) || Honeywell infrared imaging system || Laser Range Finder and Marked Target Seekers (LRMTS) || TIALD laser designator pod || TIRRS (Tornado Infrared Reconnaissance System) || SLIR (Sideways Looking Infra Red) || IRLS (InfrarRed LineScan) || RAPTOR aerial reconnaissance pod || RAFAEL LITENING targeting pod || BAE Systems Sky Shadow electronic countermeasure pod.

ARMAMENT: (2) 27 mm (1.06 in) Mauser BK-27 revolver cannon internally mounted under each side of fuselage, each with 180 rounds || Hardpoints: (4) light duty + (3) heavy duty under-fuselage and (4) swivelling under-wing pylon

stations holding up to 9,000 kg (19,800 lb) of payload, the two inner wing pylons have shoulder launch rails for (2) Short-Range AAM (SRAAM) each || AIM-9 Sidewinder or AIM-132 ASRAAM for self-defence || AGM-65 Maverick || Brimstone missile || Storm Shadow cruise missile || ALARM missile || 500 lb Paveway IV || 1000 lb (UK Mk 20) Paveway II/Enhanced Paveway II || 2000 lb Paveway III (GBU-24)/Enhanced Paveway III (EGBU-24) || Hunting Engineering BL755 cluster bombs || JP233 or MW-1 munitions dispensers (for runway cratering operations) || B61 or WE.177 tactical nuclear weapons.

SOURCE: [SCO] Wikipedia http://en.wikipedia.org