

Modernisation of Turkey's tactical air force faces challenges

Adam Michalski

On 25 March, Turkey and the United Kingdom signed an agreement concerning the maintenance and operation of Eurofighter Typhoon multirole aircraft, purchased by the Turkish Air Force last year. The agreement provides, among other things, the training of 10 Turkish pilots and 100 ground crew technicians in the United Kingdom. It marks the next stage of the \$10.7 billion contract signed with the UK in October 2025 for Turkey's purchase of 20 Eurofighter Typhoon fighter jets in the Tranche 4 configuration. The latest agreement also includes an advanced weapons package for the aircraft, comprising MBDA Meteor long-range air-to-air missiles and Brimstone precision-guided air-to-ground missiles. Deliveries of the newly built jets are scheduled for the period between 2030 and 2033.

The Eurofighter Typhoon aircraft are intended to fill a capability gap in the Turkish Air Force as its F-16 fleet continues to age and to serve as an interim solution until the domestically produced Kaan fighter jet enters service and F-35 aircraft are acquired. At the same time, Turkey aims to use the ongoing domestic modernisation of its F-16 fleet (both existing and prospective aircraft) and the development of the Kaan programme as tools to build its industrial and operational autonomy. US sanctions continue to slow the modernisation of the Turkish Air Force, complicating the development of the Kaan project and preventing the acquisition of F-35 aircraft for the time being.

Commentary

- **The purchase of Eurofighter Typhoon fighter jets is intended to partially fill the capability gaps created by the aging F-16 fleet, which remains the backbone of the Turkish Air Force.** Turkey currently operates around 230-240 F-16 fighter jets, of which an estimated 150 are operational. Most of them are older Block 30/40/50 variants from the 1980s, 1990s, or early 2000s. The most recent batch of 30 F-16C/D Block 50+ aircraft was delivered in 2011-12. Turkey continues to negotiate with the United States regarding the purchase of 40 new F-16 Block 70 aircraft, valued at approximately \$7 billion. However, the talks have been protracted, with Ankara seeking access to source codes to enable the future integration of domestically developed air-to-air and air-to-ground missile systems, as well as indigenous radar systems, into these aircraft. At the same time, Turkey has opted out of US modernisation packages for its existing fleet. Instead, it has been upgrading primarily its oldest F-16 Block 30 jets under the Özgür programme, integrating Turkish avionics, radars, weapons, and electronic warfare systems.
- **Turkey views the purchase of Eurofighter Typhoon aircraft as an interim solution. It aims to operate 44 aircraft of this type by 2033, with an option to order additional units.**

However, its plans extend beyond the purchase of 20 new UK-built fighter jets, as it is also pursuing a parallel programme to acquire second-hand aircraft. It intends to procure a total of 24 additional Eurofighter Typhoon jets from third countries: 12 Tranche 3A aircraft from Qatar (agreement finalised) and 12 from Oman (negotiations ongoing). The United Kingdom has already approved the transfer of these aircraft, although their price has not been publicly disclosed.

- **Turkey's long-term goal is to bring fifth-generation aircraft into service, both through the gradual development of its indigenous Kaan fighter jet and the purchase of US-made F-35 aircraft.** At present, both efforts face difficulties stemming from US sanctions imposed in 2020 following Turkey's acquisition of the Russian S-400 air defence system. The purchase of F-35 aircraft remains a key challenge, as US restrictions continue to pose a significant obstacle. According to a statement made by the defence minister in November 2024, Turkey is seeking to purchase a total of 40 F-35 aircraft; however, for the transaction to proceed, it would need to resolve the S-400 issue (see: '[Turkey and the US: a costly normalisation](#)'). Turkey presents its domestically developed Kaan as a fifth-generation fighter jet; however, compared with the F-35, it remains significantly less technologically advanced, particularly in terms of stealth technology, sensors, and network-centric capabilities. The Kaan is intended to gradually replace the ageing F-16 fleet and to increase Turkey's technological independence through the substantial involvement of domestic companies in the production chain. The programme faces challenges, as the early versions of the Kaan are powered by US-made GE F110-GE-129 engines, the supply of which is constrained by the aforementioned US restrictions. For this reason, Turkey has been developing its own TF-35000 engine. However, its full integration with the indigenous aircraft is not expected until around 2032, thereby delaying the entire programme.