

= Grumman XTSE =

The Grumman XTSE was a proposed twin @-@ engine torpedo scout aircraft , designed by Grumman for the United States Navy towards the end of World War II . Based on the design of the Grumman F7F Tigercat fighter , enlarged and with the addition of a bomb bay , the XTSE was deemed too large for carrier operations , and the project was cancelled before any aircraft were built . Instead , the Navy chose to order the single @-@ engine XTB3F , which became the successful AF Guardian .

= = Design and development = =

In 1944 , it was determined that the Grumman XTB2F , then under development for the Navy , would be too large to practically and safely operate from aircraft carriers . Even the new Midway @-@ class aircraft carriers , known as " battle carriers " (CVB) and the largest aircraft carriers built by any nation to that point , would have difficulty operating the massive aircraft , which was the size of a U.S. Army Air Force medium bomber . As a result , in late June 1944 , Grumman submitted its G @-@ 66 design to the Bureau of Aeronautics (BuAer) . After a review of the design by BuAer during the following month , a revised design was submitted , and on August 17 the existing contract for the XTB2F was modified to instead order two XTSE @-@ 1 aircraft , to be based on Grumman 's F7F @-@ 2 Tigercat two @-@ seat , twin @-@ engined fighter @-@ bomber , the first prototype intended to be a conversion of a F7F airframe .

A mid @-@ wing , all @-@ metal , cantilever monoplane with two Pratt & Whitney Double Wasp radial engines mounted in streamlined nacelles under the wing , the XTSE @-@ 1 was intended to carry two crew members in tandem seats , and featured an internal bomb bay and a SCR @-@ 720 radar set , the radar later being replaced in the design by an AN / APS @-@ 3 or AN / APS @-@ 4 set . A second seat was added for the radar operator .

The outer wing of the XTSE was lengthened by 7 @.@ 8 feet (2 @.@ 4 m) compared to that of the F7F @-@ 2 , while the size of the horizontal stabilizer was increased by 28 inches (71 cm)) . The vertical stabilizer was also enlarged , while the aircraft 's weight increased by almost two thousand pounds (900 kg) over that of the Tigercat .

The wings folded upwards for stowage aboard aircraft carriers , while the undercarriage and arrestor hook were hydraulically operated . Gun armament was planned to be four .50 caliber (12 @.@ 7 mm) Browning M2 machine guns , or , alternatively , two 20 mm Hispano cannon , while a bomb bay based on that of the Grumman TBF Avenger was installed in a fuselage stretched by 5 @.@ 5 inches (14 cm) .

= = = Cancellation = = =

A mockup of the cockpit , center fuselage and wing center section was built and was inspected by the BuAer in the fall 1944 . However , the contract for the prototype XTSE @-@ 1s was terminated in January 1945 . This was due to a variety of factors , including the Navy 's belief that the Grumman engineers and factory were already at capacity producing the F6F Hellcat , the F7F , and the F8F Bearcat , that the XTSE @-@ 1 would be too large for practical operations from escort carriers , and because it was believed the Grumman G @-@ 70 , to be built as the XTB3F , was a better prospect . In addition , the F7F was proving difficult to certify for operations from aircraft carriers , further prejudicing the Navy against the design .

Some sources erroneously state that the XTSE @-@ 1 became the XTB2F , however this is not the case . The XTSE @-@ 1 was the only aircraft ever designated by the U.S. Navy in the ' TS for Torpedo Scout ' category , the designation being superseded and incorporated , along with ' BT for Bomber @-@ Torpedo ' , ' SB for Scout @-@ Bomber ' and ' TB for Torpedo @-@ Bomber ' , into the new ' A for Attack ' series .

= = Specifications (XTSE @-@ 1) = =

Data from

General characteristics

Crew : 2 (Pilot and radar operator)

Length : 46 ft 4 in (14 @. @ 12 m)

Wingspan : 59 ft 4 in (18 @. @ 08 m) (folded span 32 feet (9 @. @ 8 m))

Height : 16 ft (4 @. @ 9 m)

Wing area : 500 sq ft (46 m²)

Airfoil : NACA 23015 @-@ 23012

Empty weight : 17 @, @ 288 lb (7 @, @ 842 kg)

Gross weight : 26 @, @ 171 lb (11 @, @ 871 kg)

Fuel capacity : 400 US gallons (1 @, @ 500 l ; 330 imp gal)

Powerplant : 2 x Pratt & Whitney R @-@ 2800 @-@ 22W Double Wasp radial engines , 2 @, @ 400 hp (1 @, @ 800 kW) each

Propellers : 4 @-@ bladed Aeroproducts H @-@ 20 @-@ 156 , 13 ft 2 in (4 @. @ 01 m) diameter

Performance

Maximum speed : 414 mph (666 km / h ; 360 kn) at 18 @, @ 600 feet (5 @, @ 700 m)

Stall speed : 84 mph (73 kn ; 135 km / h)

Range : 975 mi (847 nmi ; 1 @, @ 569 km) internal fuel at 172 miles per hour (277 km / h)

Combat range : 395 mi (343 nmi ; 636 km) radius with two 150 US gallons (570 l ; 120 imp gal) drop tanks

Service ceiling : 36 @, @ 500 ft (11 @, @ 125 m)

Rate of climb : 3 @, @ 920 ft / min (19 @. @ 9 m / s)

Wing loading : 47 @. @ 9 lb / sq ft (234 kg / m²)

Power / mass : 6.5lb / bhp

Armament

Guns : 4 .50 @-@ calibre machine guns

Hardpoints : Two , 1 @, @ 000 pounds (450 kg) capacity each

Bombs : Internal bomb bay , capacity one Mark 13 torpedo , one 2 @, @ 000 pounds (910 kg) bomb or naval mine , or up to 4 @, @ 000 pounds (1 @, @ 800 kg) smaller bombs , or up to 1 @, @ 300 pounds (590 kg) depth charges .