

## Bristol Taurus



Le Taureau a été développé à partir de [Bristol Aquila](#) avec l'objectif était de créer un [moteur](#) qui fournirait une puissance d'environ 1 000 chevaux (750 kW) avec un poids relativement faible. Le Bristol initialement considéré comme les principaux moteurs des années trente la [Bristol Aquila](#) et [Bristol Persée](#). Mais l'augmentation rapide de la vitesse et la taille des avions nécessitant des moteurs ont été conçus à l'époque avec une puissance supérieure à pouvoir fournir les deux modèles précédents. Mais ceux-ci ont été utilisés comme base pour les grands projets qui se matérialisent pour '[Aquila](#) en Taureau alors que le [Persée](#) dans '[Hercule](#).

Contrairement aux projets précédents, où l'utilisation du système de une gaine valves II a été jugé à nouveau, dans le Taureau était maintenant bien compris et le moteur qui a été livré déjà fourni la même puissance, 1015 ch (760 kW), qui fournirait ses versions finales (1 130 ch - 840 kW). Le prototype II se tourna vers le banc en Novembre 1936 et, après le développement initial, la première production en série Taurus provenaient de petites lignes d'assemblage avant le début de Guerre mondiale. Son utilisation ne se produisait sur bombardier torpille bimoteur [Bristol Beaufort](#). Cependant, après quelques années, il a été remplacé par Pratt Whitney R-1830 Double Wasp. Le revêtement de cette soupape du moteur sera également monté sur le puissant [Napier Sabre](#).

Le Taurus quatorze cylindres radiales doté d'un compresseur à une seule vitesse avait des cylindres d'une course et d'un alésage réduits par rapport à ceux du [Perseus](#) qui le précédait. D'une cylindrée de 25,4 litres il était plus compact que son prédécesseur dont il reprenait les chemises louveroyantes. Le Taurus fut monté, par exemple, sur l'avion embarqué Fairey [Albacore](#) ou sur le bombardier Bristol [Beaufort](#).

Source : <https://boowiki.info/art/les-moteurs-d-avions-britanniques/bristol-taurus.html>

<http://jnpassieux.fr/www/html/Taurus.php>

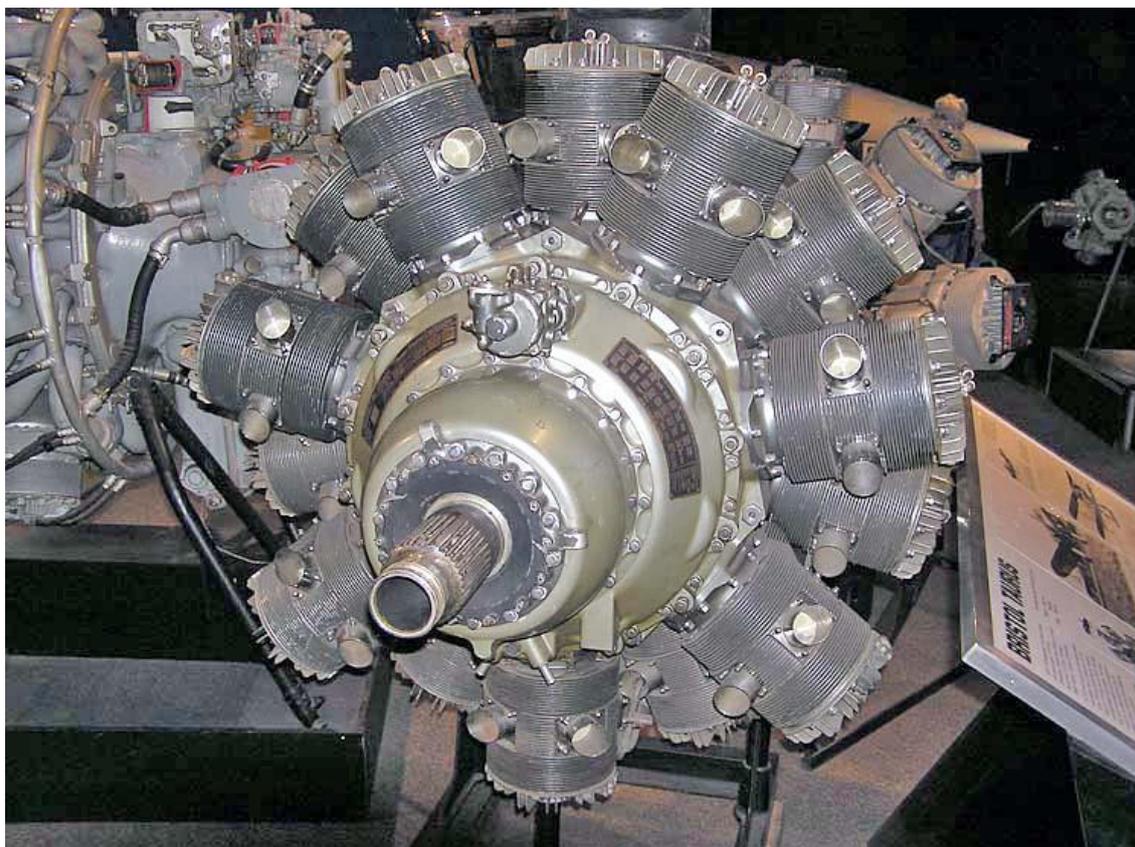
Version anglaise

The **Taurus** is a British 14-cylinder two-row [radial aircraft engine](#), produced by the [Bristol Engine Company](#) starting in 1936. The Taurus was developed by adding cylinders to the existing single-row [Aquila](#) design and transforming it into a twin-row radial engine, creating a powerplant that produced just over 1,000 horsepower (750 kilowatts) with very low weight.

### Design and development

Bristol had originally intended to use the Aquila and [Perseus](#) as two of its major product lines in the 1930s, but the rapid increase in size and speed of aircraft in the 1930s demanded much larger engines than either of these. The mechanicals from both of these designs were then put into two-row configurations to develop much larger engines, the Aquila becoming the Taurus, and the Perseus becoming the [Hercules](#). The Taurus was a [sleeve valve](#) design, resulting in an extraordinarily uncluttered exterior and very low mechanical noise. It offered high power with a relatively low weight, starting from 1,015 hp (757 kW) in the earliest versions. It was also compact, with a diameter of 46 inches (1,200 mm) which made it attractive to fighter designers. Unfortunately, the engine has also been described as "notoriously troublesome", with protracted development and a slow growth in rated power. After several years of development, power had been increased from 1,015 hp (757 kW) to only 1,130 hp (840 kW). As the most important applications of this engine were in aircraft that flew at low altitude, engine development efforts focussed on low-altitude performance.

The first Taurus engines were delivered just before [World War II](#) began and found some use primarily in the [Fairey Albacore](#) and Bristol's own [Beaufort torpedo bomber](#). Starting from April 1940, it was suggested to replace the Taurus engines of the latter by the famous [Pratt & Whitney R-1830 Twin Wasp](#), itself possessing a slightly larger 48 inches (1.2 meters) diameter, but this change was postponed to the autumn of 1941 while attempts were made to cure the reliability problems of the Taurus, and later had to be temporarily reversed because of shortages of Twin Wasp engines. The Twin Wasp was, however, strongly preferred, especially for overseas postings, because of its much greater reliability. In later models of the Taurus engine the reliability problems were mostly cured by a change in the cylinder manufacturing process, although the engine kept a poor reputation, and in the Albacore the Taurus engine was retained until the end of that aircraft's production in 1943. There were no other operational applications of the Taurus engine, because its initial reliability problems discouraged the development of Taurus-powered aircraft, and because later-war combat aircraft demanded more powerful engines. Its production lines were closed down in favour of the Hercules engine.



## Variants

### Taurus II

1940 1110 hp at 3100 rpm with 4.25 lb boost @ 4000 ft

### Taurus III

1060 hp.

### Taurus VI

1130 hp.

### Taurus XII

1940 1130 hp at 3100 rpm with 4.75 lb boost @ 3500 ft. Supercharger ratio decreased, impeller diameter increased.

### Taurus XVI

1940 1130 hp.

### Taurus XX

Trials engine only, one built.

## Specifications (Taurus II)

### General characteristics

- **Type:** 14-cylinder, two-row, supercharged, air-cooled [radial engine](#) with dual ignition
- **Bore:** 5 in (130 mm)
- **Stroke:** 5.625 in (142.9 mm)
- **Displacement:** 1,550 cu in (25.4 L)
- **Length:** 49.2 in (1,250 mm)
- **Diameter:** 46.25 in (1,175 mm)
- **Dry weight:** 1,301 pounds (590 kg)

### Components

- **Valvetrain:** [Sleeve valve](#)
- **Supercharger:** Single-speed [centrifugal type supercharger](#)
- **Fuel system:** [Caudel-Hobson carburettor](#)
- **Fuel type:** 87 [Octane petrol](#)
- **Cooling system:** Air-cooled
- **Reduction gear:** [Farman epicyclic gearing](#), 0.444:1

