In 1933 Sopwith floated a new public company, Hawker Aircraft Ltd taking over the assets of the HG Hawker Engineering Co. HAL needed more production facilities, so in 1934 Sopwith bought the Gloster Aircraft Co, using Hart and Fury profits.

In 1935 Sopwith formed a trust to buy the Armstrong Siddeley Development Company and created a public holding company, the Hawker-Siddeley Aircraft Company. The holding company now embraced Hawker, Gloster, Sir WG Armstrong Whitworth Aircraft, Armstrong Siddeley Motors, Air Service Training and AV Roe & Co. Crucially the holding company now had very significant manufacturing facilities to supplement Hawker Aircraft's limited capacity in Kingston but each organization was still free to pursue its own designs.

The 1935 Hawker Hurricane was Sydney Camm's most famous fighter, the hero of the Battle of Britain which served in every theatre throughout World War II. In 1933 Camm interested the Air Staff in a monoplane Fury development. In 1934 Rolls-Royce proposed a new 1000 hp engine later named Merlin and the “Hawker High Speed Interceptor Monoplane” was designed using it. This matured into the Hurricane which George Bulman first flew in November 1935. Because the Hawker board started the production process ahead of a Government contract there were enough Hurricanes in service in 1940 to play the major role in defeating the Luftwaffe. It was the RAF's first fighter to exceed 300mph, the first with 8 guns and the first with a retractable undercarriage. Over 14,000 were built.

The 1941 Hurricane II introduced 10 guns, or two or four cannon With its legendary rugged construction the Hurricane II performed very successfully in all theatres of war as a ground attack aircraft.

The 1940 Hawker Typhoon was the first 400 mph fighter in the RAF and excelled in ground attack. The Typhoon was heavily armed with four 20mm cannon and powered by the 2000 hp Napier Sabre. Unsuccessful as an interceptor fighter because of its thick wing the Typhoon was used with great success in ground attack, especially against enemy armour. It was the first Hawker aircraft with semi-monocoque construction replacing steel tube. Over 3,200 were built by Glosters.

The 1942 Hawker Tempest was the best low altitude fighter of World War II. Developed from the Typhoon with a thinner wing the Tempest was the fastest low level fighter of the war and was fully controllable when dived to 545 mph. With its four 20 mm cannon it shot down more German V1 flying bombs than any other type, saving thousands of British lives. With the Typhoon it supported the advance into Germany after the D Day invasion.

The 1944 Hawker Tempest II with the Bristol Centaurus radial engine remained in RAF service to 1949. In total 1400 Tempests were built, mostly in Hawker's satellite factory at Langley near Slough.

The 1945 Hawker Sea Fury with a top speed of 465 mph was the pinnacle of the piston engined fighter and the last built by Hawker. A light weight development of the Tempest the superb Sea Fury served with the Royal Navy and the Royal Australian Navy in the Korean war where it was the first piston engined fighter to shoot down a jet, a MiG 15. Sea Furies were also supplied to the Royal Canadian Navy and to the Netherlands where they were also built under licence. ‘De-navalised’ Furies were sold to Iraq, Pakistan and Egypt, and refurbished aircraft were sold to Burma and Cuba. 970 were built.