



BK117

Twin-Engine Multi-Purpose Helicopter

How a simple development philosophy and a spirit of challenge made the BK117 a global hit with over 1,200 units sold around the world.

1982

Prototype

A joint development agreement was concluded with MBB in 1977. In 1982, a prototype model was type approved for the first time as a domestically manufactured helicopter.



1993

BK117 B-2

The B-1 featured an engine conversion from the prototype model, which boosted high-temperature and high-altitude performance, and also increased gross weight to 3,200 kg. The B-2 further added to the transmission output of the B-1, and also increased the maximum gross weight by 150 kg. These enhancements expanded the applications of the BK117 as a multi-purpose helicopter.



1995

BK117 C-1

The C-1 replaced the engine with Turbomeca Arriel, a centrifugal gas turbine engine for helicopters that is highly popular for its stable performance. Arriel dramatically improved the hovering performance of BK117.



2001

BK117 C-2

The C-2 expanded cabin space by approximately 30% compared to the C-1. The gross weight was also increased to 3,585 kg. The C-2 marked a new evolution for the BK117 with the introduction of innovative technologies, such as design changes of the horizontal stabilizers and blades that boost flight performance, noise reduction, and an easy-to-see instrument panel that reduces the workload of the pilot.



The BK117 helicopter was developed jointly by Kawasaki and MBB of West Germany (currently Airbus Helicopters). In 1982, the twin-engine, multi-purpose, high-performance helicopter was type approved as the first domestically manufactured helicopter. Since then, it has been used for a variety of applications, including transporting cargo, rescue, patrol, and emergency medical services, steadily increasing sales.

The design principle behind the BK117 was simple: to develop a helicopter that was safe and easy to use. To achieve this goal, the development team worked to overcome various technological challenges from the initial design stage. First, the helicopter was to be

equipped with two independent engines, each of which would be able to fly the helicopter alone should the other engine fail midflight. Second, the floors of the passenger cabin and cargo hold were to be on the same level, with sliding doors provided on both sides of the cabin and clamshell doors at the rear. Third, the transmission design was simplified for enhanced reliability.

The BK117 helicopter is loaded with numerous features that enable a wide range of applications to be carried out flawlessly, instead of simply achieving safe flight. The emergency medical services (EMS) model whose development was announced in 1976 is enormously popular as a medevac helicopter. This is

because it perfectly embodies the design principle of a safe and easy-to-use helicopter.

The BK117 helicopter has undergone a number of incarnations, starting from the prototype and then evolving from series A through C. The latest variant C-2 has obtained a larger fuselage in a full model change, in addition to improved flight performance. The engineers who developed the early models remarked, "Normally, it takes a decade before a development effort bears fruit. A manufacturer that does not give appropriate weight to this development process will lose the foundation on which to stand." This will to take on challenges still lives on 30 years after the first model was launched.