

# DeHaviland DHC-2

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## DeHaviland DHC-2 "Beaver"

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### THE PLANE

Here is a military aircraft, seldom modeled, that also has a huge variety of surplus examples flown in a civilian role to choose from. There are conventional landing gear versions as well as ski and float conversions to choose from. This an all around aircraft in full scale as well as in RC form.

Aircraft built by the DeHaviland aviation company have had an illustrious history ever since they began building aircraft in 1920. The marquee continued even after being bought up by Hawker Siddley in 1964.

DeHaviland Canada was formed in 1928 to manufacture the DeHaviland 'Moth' biplane for training Canadian airmen. After WWII the company continued to design and build aircraft

specifically for the Canadian environment.

So, finally, we get to the DHC-2 'Beaver' built from 1948 until 1967. When production ceased, some 1,657 Beavers had been built. An incredible number are still flying all around the world both in military and civilian roles. On wheels, skis, or floats, it does it all. An aircraft that sold new for about \$50,000 can now go for as much as \$500,000 in 2010 depending on condition and equipment. In 1987 the Beaver was named as one of the top ten Canadian engineering achievements of the 20<sup>th</sup> Century.

The Beaver was designed for Short Takeoff and landing (STOL) operation with a powerful 450 HP PW R-985 Wasp Jr. engine. Some later versions were powered with a 578 to 600 HP Pratt & Whitney PT6 -6 turbo-prop with a three bladed Prop.

The factory requested design parameters for the new aircraft and when they told the pilots that, using the requested features, the aircraft would be very slow, the pilots replied, " It only has to be faster than a dogsled". The end result was a plane with a payload of at least 1200 pounds and a gross weight of 5100 pounds. All fuel is carried in three fuselage tanks below the cabin floor.

The wingspan is 48 feet with a 10.5:1 high aspect ratio constant chord design with large flaps and ailerons. Fuselage length is 30 ft 4 inches with a capacity of up to 7 passengers including the pilot. Huge doors on both sides allow loading from either side of the dock.

The original Beaver was so successful the company followed on with a larger version called the 'Otter' and a twin-engine 'Otter' as well. That led to the 'Caribou' and 'Buffalo', those with twin engines.

Googling "DeHaviland Beaver" will get you an astonishing amount of information.

### THE PILOT(S)

It is doubtful weather any enemy aircraft or ground equipment was ever destroyed by a Beaver, but both military and private pilots all over the world have flown this STOL into, and out of, places they could not have gone any other way. There is one story of a Beaver pilot cramming almost 25 Eskimos into his plane during a rescue mission in Canada.

Foolhardy, perhaps, but I would bet that more than one Beaver was flown successfully at close to 6000 pounds gross weight. Bush flights in back country Alaska and Canada are legion and often incredibly risky.

### AS A MODEL

Pesonally, I have built two 1:7 size models powered by 0.60 engines from plans sold by Model Airplane News. One was on wheels and one on floats. The plans show only the float version. Both flew well, but I crashed one and the other, on floats, has a damaged wing waiting for repair.

The high aspect wing makes a smaller model very difficult to build with sufficient strength. The wing struts should be made functional.

I found a kit for an 18% scale version of the turboprop version on the web designed by MR Aerodesign that looks very interesting and various accessories are available to dress the model. His plans suggest a Zenoah G-38 for power.

Excellent three views are available in the case that you wish to draw your own plans. The structure is simple with a slab sided fuselage having rounded corners, and a constant chord wing. Good flying ARFs may be available also.

One problematic detail is the corrugated control surfaces on the flaps, ailerons, elevators, and rudder. These can be simulated in several ways with a little ingenuity.