

Topic Page: [Helicopters](#)

Definition: **helicopter** from *Dictionary of Energy*

Transportation. a wingless aircraft acquiring its primary motion from engine-driven rotors that accelerate the air downward, providing a reactive lift force, or accelerate the air at an angle to the vertical, providing lift and thrust.

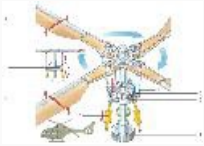


Image from: [A helicopter rotor head transfers the power of... in Philip's Encyclopedia](#)

Summary Article: **helicopter**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Powered aircraft that achieves both lift and propulsion by means of a rotary wing, or rotor, on top of the fuselage. It can take off and land vertically, move in any direction, or remain stationary in the air. It can be powered by piston or jet engine. The autogiro was a precursor.

The rotor of a helicopter has two or more blades of aerofoil cross-section like an aeroplane's wings. Lift and propulsion are achieved by angling the blades as they rotate. Experiments using the concept of helicopter flight date from the early 1900s, with the first successful lift-off and short flight in 1907. Ukrainian–US engineer Igor Sikorsky built the first practical single-rotor craft in the USA in 1939.

A single-rotor helicopter must also have a small tail rotor to counter the torque, or tendency of the body to spin in the opposite direction to the main rotor. Twin-rotor helicopters, like the Boeing Chinook, have their rotors turning in opposite directions to prevent the body from spinning. Helicopters are now widely used in passenger service, rescue missions on land and sea, police pursuits and traffic control, fire-fighting, and agriculture. In war they carry troops and equipment into difficult terrain, make aerial reconnaissance and attacks, and carry the wounded to aid stations. A fire-fighting helicopter was tested in Japan in 1996, designed to reach skyscrapers beyond the reach of fire-engine ladders.

Naval carriers are increasingly being built to accommodate helicopters with depth charges and homing torpedoes guided to submarine or surface targets beyond the carrier's attack range. The helicopter may also use dunking sonar to find targets beyond the carrier's radar horizon. As many as 30 helicopters may be used on large carriers, in combination with V/STOL aircraft, such as the Harrier. See also autogiro, convertiplane.

weblinks

Landings

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helicopter

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helicopter. (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. Abington, UK: Helicon. Retrieved from <https://search.credoreference.com/content/topic/helicopter>



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Chicago

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