

## 9) HELICOPTERS

A helicopter is a type of rotorcraft in which lift and thrust are supplied by horizontally spinning rotors. This allows the helicopter to take off and land vertically, to hover, and to fly forward, backward and laterally. As early as 400 CE in China there are records of a kite that used rotary wings to help lift it skywards. In the Middle Ages, some toys utilised the principle of the helicopter, where a rotary blade was turned by pulling a string. Leonardo da Vinci, a great inventor in the 1500's, designed and drew diagrams of a helicopter that used a spiral airscrew to achieve lift. Unfortunately, Leonardo's designs never came to fruition in his lifetime.

Petróczy, Kármán and Žurovec were Hungarian and Czech engineers who worked on helicopter development before and during WWI, producing two experimental prototypes the PKZ-1 & the PKZ-2.

### Naval helicopter:

The Westland Wessex HU.5 is a British turbine-powered development of the Sikorsky H-34 (in US service known as Choctaw). It was developed and produced under licence by Westland Aircraft. A Royal Navy service troop transporter, carries 16 Royal Marines.



Helicopters have proved advantageous to conduct tasks that were previously not possible with other aircraft. Uses include transportation of people and cargo, military uses, construction, firefighting, search and rescue, tourism, medical transport, law enforcement, agriculture, news and media, and aerial observation, among others.



Helicopters are commonly used today for search and rescue and medical assistance.

2 April 1918 flight trials began of the PKZ-2 helicopter



1483 Leonardo da Vinci's helical airscrew



The Aérospatiale Alouette II is a French helicopter which was the first production helicopter powered by a gas turbine engine instead of the heavier conventional piston powerplant.



The Sikorsky S-64 Skycrane is an American twin-engine heavy-lift helicopter. Originally a Sikorsky Aircraft product, the type certificate and manufacturing rights were purchased from them by Erickson Air-Crane in 1992.

