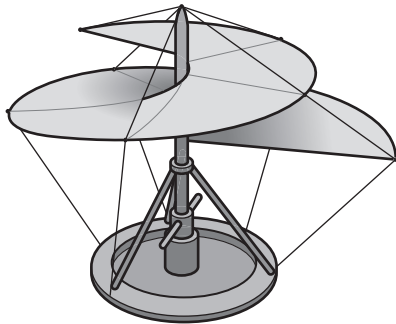


- 18** Leonardo da Vinci proposed a flying machine that would work like a screw to lift the pilot into the air. The 'screw' is rotated by the pilot.



The machine and the pilot together have a total mass of 120 kg.

Which useful output power must the pilot provide to move vertically upwards at a constant speed of 2.5 m s^{-1} ?

- A** 48 W **B** 300 W **C** 470 W **D** 2900 W

- 19** A car is driving on a straight road. The engine is producing a constant power of 40 kW. The car is moving at a constant speed of 20 m s⁻¹. The resistance to the motion is 2000 N. The car is moving at a constant speed.