

A vertical-axial wind-wheel has impellers. Each impeller is placed on the axle dividing the impeller to different in area sections. For each impeller at distance from the axis of the impeller smaller than the width of the smaller section of the impeller support is installed. With the support each section of the impeller at rotation of the impeller on the axle can interact. This design provided increase of torque of the wind-wheel due to decrease of resistance for the impellers moving upwind.