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SINGLE-SEAT ULTRALIGHT VERTICAL TAKE-OFF AND LANDING AIRCRAFT PROJECT

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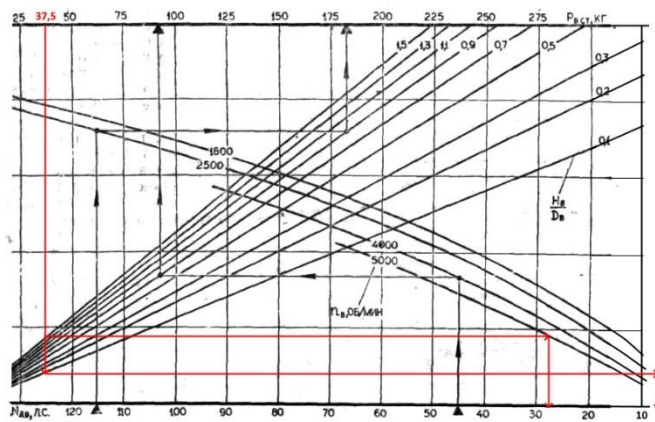
As the name suggests, the article describes a draft design of a vehicle – a «flying motorcycle».

The aim of the authors' work is to perform the calculation of the propeller group (PG) of the device and present its appearance. The method of calculating propellers used by us was proposed in the magazine «designer-Modeler» for calculating homemade propellers.

The ability to perform the calculation based on any combination of initial values is the advantage of the method used: engine power, propeller thrust, aircraft speed or propeller diameter.

This method of calculation provides for the operation of two nomograms reflecting the relationship between the specified values. The authors of the method proposed only one course of calculations, the authors of the work described the reverse course, which allowed us to apply this method to a different set of source data.

In addition to calculating the propeller group, a model of this vehicle was built in the SolidWorks program [1; 2].



References

1. Kondratiev V.P., Propeller-air, propeller // Modelist-Constructor. 1988. No. 12. P. 52–60.
2. Nikitin I.V. Classification of ultralight aircraft and analysis of ultralight aviation in Russia. // Scientific Bulletin of MSTU GA series Aeromechanics and strength, maintaining airworthiness VS-2006. P. 1–7.