

EXTENDED HUBS V12 RANGE

=> In January 2020, E-PROPS has stopped manufacturing V12 hubs. They have been replaced by the V20 hubs (evolution of the range).

Extended hubs V12 range were made of 1 piece integrated with the hub.

Here is a presentation of these hubs: <https://youtu.be/IOZhK7qPJMw>



présentation vidéo

ADVANTAGES OF THE EXTENDED HUBS SYSTEM

- **Weight reduction**

weight of the V12 spacer (carbon extended hub) = $3.5 \text{ gram} * \text{Se in mm}$ (including screws)

it means 3.5 gr/mm

To be compare with 20 gr/mm of a usual aluminium spacer (with screws)

Example for the spacer of a Savannah ultralight :

- weight of an E-PROPS extended carbon hub, length 120 mm (including screws) = 0,42 kg

- weight of an usual aluminium spacer, length 120 mm (including screws) = 2,4 kg
it means a reduction of 2 kg !

- **Less weight on the gear box**

A too big weight hanged to the gear box is reducing its lifetime.

The heavy propellers generate a significant risk of breakage of the gear box.

Reducing the weight of the spacer allows to limit this risk.

- Lower cost

The extended hubs are at the same price as the standard hubs.
No need to buy a spacer in addition. Considerable savings !

- Less vibrations

With an extended hub, the propeller centering is direct. No need of spacers and screws stacks, which can generate vibrations.

A very simple system strongly reduces vibrations risks.

- A reliable and durable system

The E-PROPS hubs, standard or extended, are extremely strong.

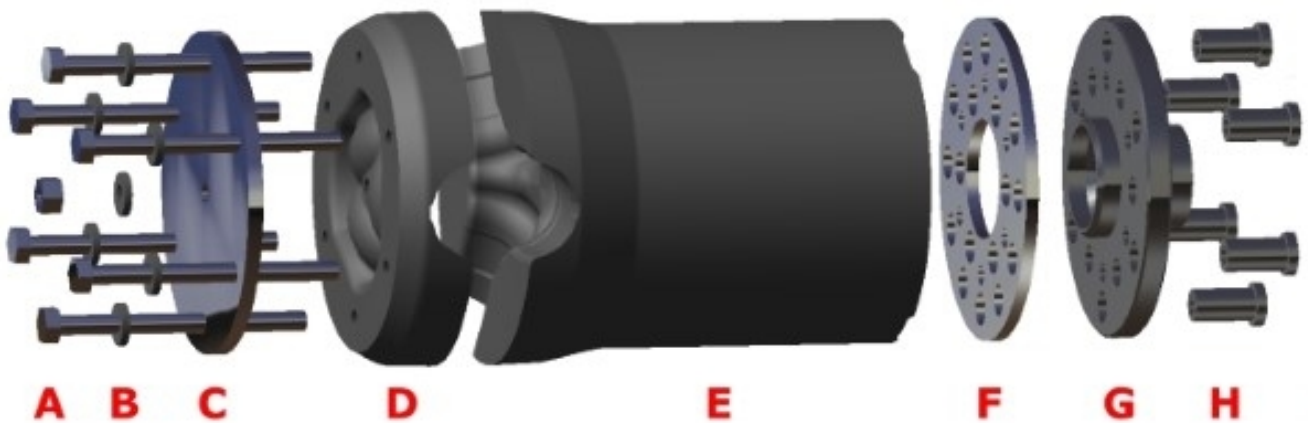
Material : 100% carbon + epoxy resin high T°

Injection with RTM process (Resin Transfer Molding)

Compact hub for minimum drag and to optimize engine's cooling.

No life limitation. Recommended major periodic inspection : 2.000 hrs

- Simple assembly and reduction of the parts number



A : 6 Screws + 1 central nut (for the central screw of the hub)

B : 7 Nord-Lock washers

C : Flange in anodized aluminium

D : Upper Half Hub

E : Lower extended Half Hub

F : Option : 5mm counterplate to adjust the length of the hub (a 5 mm step)

G : Reducer flange (part of the engine)

H : 6 Rotax drive lugs (threaded)

3-blade propeller with extended hub : 3 blades, 2 half hubs, 1 aluminium flange, 7 Nord-Lock washers, 6 screws, 1 nut

=> It means 20 parts

3-blade propeller with aluminium spacer : 3 blades, 2 half hubs, 1 aluminium flange, 7 washers, 6 screws, 1 nut , 1 aluminium spacer, 6 drive lugs for spacer, 6 washers, 6 nuts, 6 screws and 6 washers for spacer.

=> It means 51 parts

The "Extended Hub" solution allows to reduce of **61%** the number of parts necessary for the propeller's assembly.



*hub with integrated spacer 115 mm (for Savannah, for example)
and on the right with a 250 mm spinner*



extended hub on a ROTAX's reducer with a spinner



Lengths available : from 0 to 115 mm, on 5 mm increments



some examples of E-Props extended hubs