

BUZZ MASTER PROP BALANCER



This extremely simple and sensitive tool uses the plum-bob and bevel principle to balance props both vertically and horizontally. It can be carried in a small tool box for easy use in the field and balances props accurately for smooth operation. The precision machined hub works with any prop designed with standard 1" center hole. Illustrated instructions included. P/N 13-17400 **\$29.95**

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WARP DRIVE ADVANCED COMPOSITE PROPELLERS



Warp Drive's Advanced Composite Carbon Fiber propeller has a structural strength near that of metal propellers. Because of the stiffness achieved by using carbon fibers, the prop will do very little coning (bending forward) under power. Proper fiber placement allows the prop to flex torsionally for maximum cruise efficiency. The strongly fixed position of the blades along with optimum torsional performance translates into more thrust than conventional propellers.

The interior structure of this new propeller is all carbon fiber - no fiberglass, no foam, no filler - an all carbon fiber matrix combined with top quality hybrid epoxies. Carbon fiber is one of the strongest building materials available. When properly engineered, carbon fiber can achieve the strength and stiffness of a metal part, as demonstrated by its wide range of industrial and aerospace uses.

WARP DRIVE PROPELLER BLADE TYPES

All propellers and blade types are available with Stainless Steel Leading Edge protection as an option at additional cost.

- STANDARD ADVANCED COMPOSITE CARBON FIBER BLADES**
The Standard Carbon Fiber Blades can be used on Rotax, Arrow, VW and similar engines.
- HIGH HORSE POWER ADVANCED COMPOSITE CARBON FIBER BLADES**
The Carbon Fiber HP Blades will be required for use on Lycoming, Continental and some auto conversion engines.

WARP DRIVE HUBS

Warp Drive offers two types of hubs of our propellers. First is our Standard Hub. This is an assembly of anodized aluminum plates and composite clamping blocks. It accommodates standard and custom hub bolt patterns of up to 3 1/8". The second type of hub is the HP Hub. This hub consists of two halves machined from solid aluminum. It is the same weight as the standard hub assembly and can accommodate Rotax, Arrow, VW, SAE I Continental, SAE II Lycoming and custom bolt patterns.

STANDARD CARBON FIBER PROPELLER

2-Blade Std Carbon Fiber Propeller.....	P/N 05-31920	\$509.00	
3-Blade Std Carbon Fiber Propeller.....	P/N 05-31925	\$760.00	
4-Blade Std Carbon Fiber Propeller.....	P/N 05-31930	\$1,062.00	
Replacement Std Carbon Fiber Blade	P/N 05-31935	\$228.95	
WITH HP HUB			
P/N 05-31940	\$795.00	P/N 05-31945	\$924.00

HIGH HORSE POWER CARBON FIBER PROP WITH HP HUB

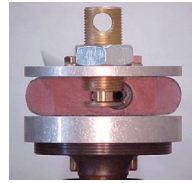
2-Blade Carbon Fiber H/P w/HP Hub	P/N 05-31950	\$972.00
3-Blade Carbon Fiber HP w/HP Hub	P/N 05-31955	\$1,225.00
Replacement Carbon Fiber HP	P/N 05-31960	\$362.00
Mounting Hardware (Rotax)	P/N 05-31965	\$17.95
Protractor.....	P/N 05-31970	\$45.50
Non-Standard Hub Pattern.....	P/N 05-31975	\$47.50
"HP" Hub (purchased separately)	P/N 05-31985	\$338.00

ORDERING A PROPELLER

We request all applicable information below when you are ordering:

- Name, Address, Phone Number(s)
- Vehicle - type, make, model, cruise speed, tractor/pusher,
- Engine - make, horse power,
- Reduction Drive - type, ratio. If there is no reduction drive, (State Prop RPM)
- Hub Requirements - A) Bolt circle dia, B) Number of bolts, C) Bolt dims, D) Center hole dims, E) Drive lug dimensions (if applicable),
- Propeller Description-rotation, diameter, structural limitation of diameter manufacturer's suggested prop description, no. of blades, tractor or pusher.

QUICK ADJUST SYSTEM IVOPROPS



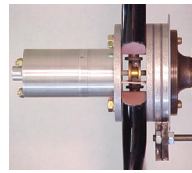
The Quick Adjust System Ivoprops allow you to adjust the pitch on the ground in a matter of seconds by turning the screw adjustor in the center of the prop. The supercams are welded on the end of the torsional rods. Each supercam fits into the groove in the screw adjustor. Turning the screw adjustor causes each cam to rotate and turn the torsional rod and thereby twist the blade therefore changing the pitch. Specify aircraft and

engine make and model, and propeller diameter.

- Ultralight Ivoprop (3.5" cord, 48" to 72" diameter) is for engines up to 100 hp.
- Medium Ivoprop (4.5" cord, 52" to 74" diameter) is for engines around 100HP.
- Magnum Ivoprop (5.5" cord, 58" to 76" diameter) is a high-horsepower version for engines up to 700 HP.
- Magnum Paddle Ivoprop (5.5" constant cord, 58" to 84" diameter" is for high-horsepower air boats and bush planes.

Magnum 2-Blade Ivoprop.....	P/N 05-33240	\$2,588.00
Magnum 3-Blade Ivoprop.....	P/N 05-33250	\$1,450.00
Magnum 6-Blade Ivoprop.....	P/N 05-33260	\$2,545.00

IN-FLIGHT ADJUSTABLE PITCH IVOPROPS

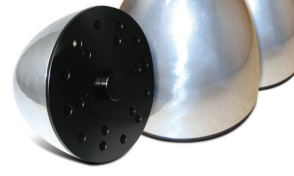


The In-Flight Adjustable Pitch Ivoprop allows the pilot to change the propeller pitch in flight through a toggle switch mounted in the cockpit. Pressing the toggle switch one way sends an electric current through the graphite brushes to the slip rings and finally to an electric motor. Torque from the electric motor is channeled to a planetary gear drive which turns the lead screw. Torsional rods transmit movement from the center of the prop to the

outside section of the blades, causing the blade to twist therefore changing pitch. Total time for the full range of adjustment is about 5 seconds. Mounts directly to any Rotax gear box (B or C0 and can be adapted to VW, Subaru, Hirth, Arrow and smaller Lycoming and Continental engines. Older model Ivoprop ground adjustable props can be converted to the In Flight System with the Retrofit Kit. In Flight adjustable hub comes assembled with complete instructions. Weight of 3 blade 72" In Flight Adjustable Prop including all required parts (furnished) is 9 lbs. Specify aircraft and engine make and model, and propeller diameter (48" to 76"). Standard Ivoprop is for engines up to 100 hp. Medium Ivoprop is for engines around 100HP (52"-74" prop dia.). Magnum Ivoprops are a high-horsepower version with wider blades and a bigger hub for engines up to 700 HP (56"-76" prop. dia.).

Magnum 2-Blade Ivoprop Kit.....	P/N 05-33270....	\$2,590.00
Magnum 3-Blade Ivoprop Kit.....	P/N 05-33280....	\$2,927.00
Magnum 6-Blade Ivoprop Kit.....	P/N 05-33290....	\$4,088.00
Magnum Retrofit Kit for Ground Adjustable Ivoprops.....	P/N 05-33295....	\$1,688.00

ROTAX PROPELLER SPINNERS



For all props with standard Rotax® 75mm bolt pattern. Spinner bulk head is pre-drilled and installs between prop and gearbox flange. Spinner installs with single bolt.

4" Diameter	P/N 05-01129..	\$129.90
6-3/4" Diameter ..	P/N 05-01132..	\$228.95
7" Diameter	P/N 05-04447..	\$171.75

UHS FIBERGLASS SPINNERS

UHS spinners are practical, attractive, and flight proven having enhanced the appearance of many different aircraft. The spinners are available in various diameters for different engine and propeller combinations. For GSC, Ivoprop, Warp Drive, and Power Fin propellers using Rotax, Lycoming, Cont. & Mosler engines, spinners are sent cut out and assembled.

Note: kits include hardware and bulkhead.

For pre-drilled cut-outs we require the following information:

1. Make and size of engine.
2. Make of Propeller.
3. Number of Blades.
4. Size required.

Given adequate information, we can also fabricate spinners for many other propeller-engine combinations. Call with your requirements and we will assess your particular application.

Size	Description	Part No.	Price	Size	Description	Part No.	Price
8"	UHS Spinner	05-09000	\$175.00	11.5"	Spinner Kit	05-09700	\$239.00
9"	UHS Spinner	05-09100	\$195.00	12"	UHS Spinner	05-09400	\$235.00
9"	9P Elongated Spinner	05-08377	\$195.00	13"	Spinner Kit	05-09800	\$255.00
10"	UHS Spinner	05-09200	\$206.00	13.5"	UHS Spinner	05-11995	\$255.00
11"	UHS Spinner	05-09300	\$235.00	14"	UHS Spinner	05-09500	\$280.00