PROPELLERS

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 opti-

mum 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.
- 2. 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.

| 3-Blade Std Carbon Fiber Propeller | . US-31925 \$037.UU |
|------------------------------------|------------------------------|
| 4-Blade Std Carbon Fiber Propeller | . 05-31930 \$965.00 |
| Replacement Std Carbon Fiber Blade | . 05-31935 \$189.00 |
| WITH HP HUB | |
| 05-31940 | \$719.00 |
| 05-31945 | \$924.00 |
| HIGH HORSE POWER CARBON FIBER PR | OP WITH HP HUB |
| 2-Blade Carbon Fiber H/P w/HP Hub | . 05-31950 \$883.00 |
| 3-Blade Carbon Fiber HP w/HP Hub | . 05-31955 \$1,225.00 |
| Replacement Carbon Fiber HP | . 05-31960 \$328.95 |
| Mounting Hardware (Rotax) | . 05-31965 \$16.55 |
| Protractor | . 05-31970 \$39.75 |
| Non-Standard Hub Pattern | . 05-31975 \$40.60 |
| Spinner (Rotax Pattern) | . 05-31980 \$112.50 |
| "HP" Hub (purchased separately) | . 05-31985 \$307.00 |
| ORDERING A PROPELLE | R |

We request all applicable information below when you are ordering:

- 1. Name, Address, Phone Number(s)
- 2. Vehicle type, make, model, cruise speed, tractor/pusher,
- 3. 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.

ULTRA-PROP



Select 2, 3, or 4 blade props. Each blade is moulded from a high strength glass-reinforced composite. High efficiency airfoil design means high thrust from a 59" diameter prop. One set of pitch blocks included, additional blocks available in 1° increments. Universal hubs made from high strength composite. Accommodates most popular

bolt-mounting patterns. Each prop comes complete with all assembly and mounting hardware, and complete instructions. Black blades and hub are beautifully complemented by high impact polyester spinner. Blades can be

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| Description | Part No. | Price | Description | Part No. | Price |
| Kit 2 Blade LH | UP102L | \$235.00 | Kit 2 Blade RH | UP102R | \$235.00 |
| Kit 3 Blade LH | UP103L | \$285.00 | Kit 3 Blade RH | UP103R | \$285.00 |
| Kit 4 Blade LH | UP104L | \$339.00 | Kit 4 Blade RH | UP104R | \$340.00 |
| Kit 5 Blade LH | 05-06455 | \$450.00 | Kit 5 Blade RH | 05-06456 | \$453.00 |
| Kit 6 Blade LH | 05-06457 | \$557.00 | Kit 6 Blade RH | 05-06458 | \$557.00 |

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. Specify aircraft and engine make and model, and propeller diameter. * Magnum Ivoprop (5.5" cord, 58" to 76" diameter) is a high-horsepower version for engines up to 700 HP.

* Magnum * Magnum Paddle Ivoprop (5.5" constant cord, 58" to 84" diameter" is for high-horsepower air boats and bush planes.

| <u>0 64 diameter is for midit-horsebower all t</u> | ioais and busi | I Dialies. |
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| Description | Part No. | Price |
| Blade Ultralight Standard Lefthand | 15-05478 | \$195.00 |
| Blade Ultralight Standard Righthand | 15-05856 | \$245.95 |
| Blade Ultralight Hi-Pitch Lefthand | 15-05477 | \$226.95 |
| Blade Ultralight Hi-Pitch Righthand | 15-06638 | \$221.95 |
| 2 Blade Ultralight Standard Lefthand | 15-04749 | \$461.95 |
| 2 Blade Ultralight Standard Righthand | 15-06312 | \$450.00 |
| Blade Medium Standard Lefthand | 15-08279 | \$844.00 |
| Blade Medium Standard Righthand | 15-07899 | \$844.00 |
| 2 Blade Ultralight Hi-Pitch Lefthand | 15-06932 | \$439.95 |
| 2 Blade Ultralight Hi-Pitch Righthand | 15-06933 | \$423.95 |
| 3 Blade Ultralight Standard Lefthand | 15-04785 | \$619.00 |
| 3 Blade Ultralight Standard Righthand | 15-06326 | \$620.00 |
| 3 Blade Medium Standard Lefthand | 15-06325 | \$1,107.00 |
| 3 Blade Medium Standard Righthand | 15-04784 | \$1,094.00 |
| 3 Blade Ultralight Hi-Pitch Lefthand | 15-06972 | \$599.95 |
| 3 Blade Ultralight Hi-Pitch Righthand | 15-07224 | \$660.00 |
| 6 Blade Ultralight Standard Lefthand | 15-08274 | \$1,238.00 |
| 6 Blade Ultralight Standard Righthand | 15-08275 | \$1,238.00 |

IN-FLIGHT ADJUSTABLE PITCH IVOPROPS



\$437.95

The In-Flight Adjustable Pitch Ivoprop allows the pilot to change the propeller pitch in flight through a toggle switch mounted in the cockpit. 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" Prop including all required parts (furnished) is 9 lbs. Specify aircraft and engine make and model, and propeller diameter (48" to 76"). Magnum lyoprops are for engines up to 700 HP (56"-76" prop. dia.).

| nagridin reoprops are for engines up to 700 mi (50 -70 prop. dia.). |
|--|
| Magnum 2-Blade Ivoprop Kit |
| Magnum 3-Blade Ivoprop Kit P/N 05-33280 \$2,755.00 |
| Magnum 6-Blade Ivoprop Kit P/N 05-33290 \$3,849.00 |
| Magnum Retrofit Kit for Ground Adjustable Ivoprops |
| P/N 05-33295 \$1,590.00 |

IVOPROP REPLACEMENT BLADES

Note: Proproot Number required prior to order. (This number can be found at the base of the original prop blade)

| High Pitch Right Hand | . P/N 15-06638 | \$221.95 |
|---------------------------|----------------|----------|
| High Pitch Left Hand | | |
| Standard Pitch Right Hand | . P/N 15-05856 | \$245.95 |
| Standard Pitch Left Hand | . P/N 15-05478 | \$195.00 |

STEEL LEADING EDGE PROP TAPE



RETROFIT KIT FOR ULTRALIGHT IVOPROPS

To upgrade Ultralight model 2 or 3 blade Quick ground adjust to Electric in flight adjust.

P/N 15-06637......**\$934.00**



CONSTANT SPEED ELECTRONIC GOVERNOR

| | A(| CCESS | ORIES | | |
|-----------------------|-----------------|---------|-----------------------|----------|---------|
| Description | Part No. | Price | Description | Part No. | Price |
| Pitch Block Set 9 DG | UP9 | \$8.50 | Pitch Block Set 10 DG | UP10 | \$8.50 |
| Pitch Block Set 11 DG | UP11 | \$8.50 | Pitch Block Set 12 DG | UP12 | \$8.50 |
| Pitch Block Set 13 DG | UP13 | \$9.50 | Pitch Block Set 14 DG | UP14 | \$8.50 |
| Pitch Block Set 15 DG | UP15 | \$8.50 | Pitch Block Set 16 DG | UP16 | \$8.50 |
| Pitch Block Set 17 DG | UP17 | \$8.50 | Pitch Block Set18 DG | UP18 | \$8.50 |
| Bolt Sleeve Set | UPSLEEVE | \$3.85 | Hardware Pack | UPHDW | \$4.00 |
| Replace LH Blade | UP105P | \$73.50 | Replace Blade RH | UP105T | \$73.50 |
| Hub half 2 Blade | UP1072 | \$35.00 | Hub Half 3 Blade | UP1073 | \$35.00 |
| Hub Half 4 Blade | UP1074 | \$35.00 | | | |

ULTRA-PROP SPINNER - Kit includes white polyester spinner, mounting bracket, and all extra hardware for installation. Specify Quicksilver MX belt drive type with 1/4 inch mounting hardware or Rotax gear drive with 5/16 or 8 mm mounting hardware. Note: Designed for use on Ultra-Prop only.

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|--------------|---------------|------------------------|
| \$50.05 | 05-04058 | 1/4" MX P/N |
| | 05-04950 | 1/4 IVI/\ F / IV |
| \$50.05 | 05-04050 | 5/16" Rotax P/N |
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