



# Airmaster

*High Performance Propeller Systems*

## AP433 / 431 Constant Speed Feathering Propeller



## Higher Performance for your Aircraft

Airmaster Propellers are setting new standards of performance and value in the light experimental aircraft market. By combining the best composite blade technology currently available, with a precise and reliable constant speed hub system, Airmaster is able to provide a unique performance enhancement to today's modern aircraft.



## Mission Statement

Our aim is to produce a range of the highest quality, best performing Constant Speed Propeller systems at a reasonable cost. Our goal is for the Airmaster name to be synonymous with: Quality, Performance, Technical Innovation and Value.

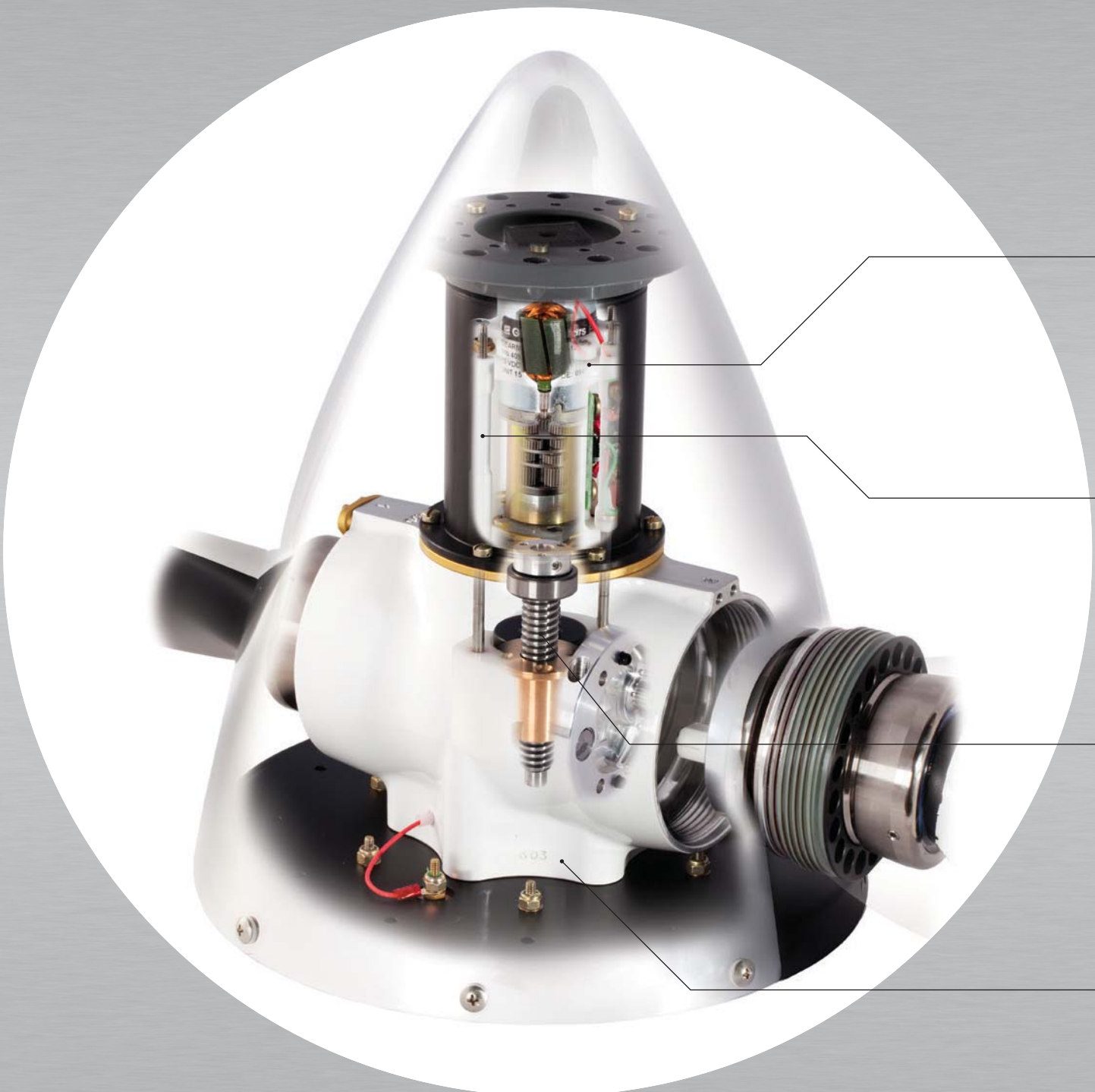


## Money Back Guarantee

We place a lot of pride in the quality of our propellers and offer a money back guarantee of satisfaction in addition to the standard product warranty of two years.

We are so confident that you will be pleased with the performance and quality of your Airmaster propeller, we are willing to fully refund the purchase price any time up to sixty days after delivery.

This gives you complete buying protection and peace of mind.



Model AP420 shown for illustration purposes

## Airmaster AC200 'SmartPitch' Controllers



**Easy to Operate** with simple selection of engine speeds for TakeOff, Climb and Cruise.



**Precise Speed Control** from modern electric 'solid state' governor.

**Flexible and Robust** with full manual override.

**Advanced Functions** feathering capability is standard and reversing functions are available as an option for amphibious aircraft.



**Hold Speed** adjustable in flight to pilots requirements.



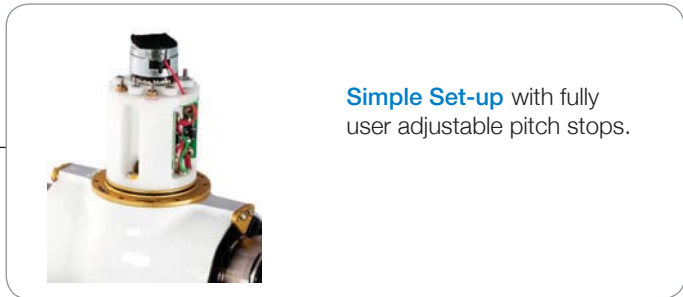
**Instant Pilot Feedback** through clear indications informing the pilot of the propeller status.

## Product Features

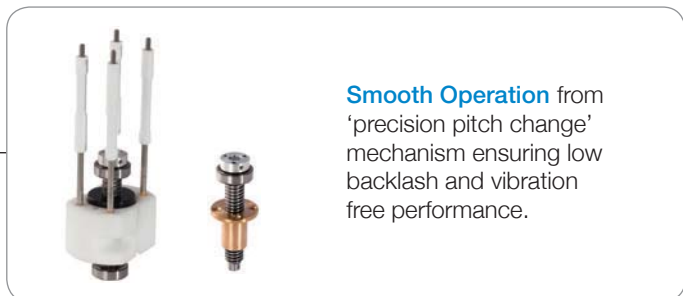
Each Airmaster propeller is crafted to the specific requirements of your aircraft and engine combination. We supply a full system incorporating CS hub, composite blades, CS governor, spinner, extensions, wiring and hardware.



**Electric Actuation** using a quality servo gearmotor



**Simple Set-up** with fully user adjustable pitch stops.



**Smooth Operation** from 'precision pitch change' mechanism ensuring low backlash and vibration free performance.



**Superior Strength** from fully machined, one piece hub.



**Easy Installation** and maintenance due to removable blade cartridge.



### Blade Options AP433 / 431

A wide range of high performing carbon composite blades using the industry standard 2.0in shank size are available.

- Aerodynamically advanced blade designs from Whirlwind Propellers Corp (USA). Efficient, quiet and light weight.
- Solid metal inlaid leading edge provides excellent protection against airborne water damage.
- Flexible design allows for clockwise and anti-clockwise rotation on tractor and pusher applications. Available for a range diameters and a variety of airspeeds.
- High gloss, natural carbon fibre finish gives good looks and a long life.



### Spinner Options

High quality spun aluminium spinners, pre-cut and fitted in a choice of sizes and finishes of painted, polished, or matt for painting.

### Mounting Options

Propeller extensions available in sizes 0.5in (12.5mm) up to 4in (100mm) to suit every engine and aircraft combination.

AP433 / 431 Specifications			
Power Capacity	Direct drive 4 cyl	130hp (97.5kW) *	
	Direct drive 6 cyl	160hp (120kW) *	
	Geared engines	160hp (120kW) *	
Maximum Speed	3000rpm		
Maximum Diameter	Up to 70in (1778mm)*		
Moment of Inertia	~0.64kgm <sup>2</sup> *		
Weight	On engine weight	AP431-WWR66U	25.5lb (11.5kg) *
	On engine weight	AP433-WWR68U	27.7lb (12.6kg)*
	In cockpit weight (controller and cables)		0.6lb (0.3kg)
Prop Flange	AP431	Rotax 4in PCD (ARP502)	
	AP433	SAE-1	
Engines	UL350iS, UL390iS, Continental O-200, Lycoming O-235 Other engines may be suitable, please enquire.		
Controller Power	Voltage supply		10V-16V DC (12V DC nominal)
	Current supply	Stand-by:	0.1A
		Cycling	0.5 – 2.0A
	Breaker	3A	
Program Interface	USB / RS232 to PC		
Speed Control	Take Off	Factory pre-set, may be customised with serial cable and PC.	
	Climb	Factory pre-set, may be customised with serial cable and PC.	
	Cruise	Factory pre-set, may be customised with serial cable and PC.	
	Hold	Factory pre-set, may be customised with serial cable and PC.	
Feather Function**	Semi-Automatic feather and un-feather cycle. Manual feather if required.		
Visual indication	Fine stop, coarse stop, feather stop, fine running, coarse running, feather running, motor over-current, system open circuit, speed signal loss.		
Installation	Controller fits standard 2 ¼ in instrument cut-out.		

AP433 / 431 Options			
Blade Options	Spec	Diameter	Application
	WWR66U	66in (1676mm)	General / High Speed
	WWR68U	68in (1727mm)	General / High Speed
	WWR/L68X	68in (1727mm)	General /STOL
	Other makes and models available, please enquire		
Direction of Rotation	Clockwise / Anti-clockwise.		
Direction of Thrust	Tractor / Pusher.		
Spinner Diameter	8.3in (210mm), 9.0in (228mm), 10.3in (261mm), 11.2in (284mm), 12.2in (310mm).		
Spinner Finish	Polished aluminium, Painted White, Matt (for painting).		
Advanced Functions	Reversing (Amphibious use only) **		
Programming	Kit available for reprogramming parameters. Includes MS Windows compatible program and serial (USB) cable.		

\* depends on blade selection.

\*\* only feathering or reversing option can be selected (not both).

## Performance



### An Airmaster CS Propeller System will give you:

- Higher top speed
- Shorter take-off roll
- Quicker climb
- Steeper descent
- Improved efficiency and flight range
- Quieter operation and lower pilot fatigue
- Safer flying
- Easy maintenance
- Complete backup from 'the factory' and a reseller network

### Performance tests have shown up to:

- 33% shorter ground roll
- 10% better climb than fixed pitch prop
- 20% improvement in cruise and economy

## Endorsements



### Scott Ehni – Zenith 701

*I love this prop! The three blade Airmaster propeller on our 701 is a major improvement to the utility of the aircraft. Better take-off/ climb/cruise /fuel economy, plus reverse. You can't get that for your UL350iS any other place but Airmaster.*

### Peter Mickelson

*We generally get off the runway about a third less than with the fixed pitch prop. I cannot hold the aircraft on the brakes at full throttle on the grass... this prop just drags the aircraft with the wheels locked!!*

### Nick Otterback – Arion Aircraft LLC

*To say the least I was very impressed with the prop. We exceeded all the number by a substantial amount over stock. The prop gives better braking effect on approach and the aircraft does not float with excess airspeed.*

### Jim Roberts – Rans S-6

*I was impressed with the quality and completeness of the propeller package. Two full turns on the fine pitch adjustment cam and I was able to hit all the published RPM numbers.*

### Arthur Hoadley - Kitfox

*Everything worked great! I did full power runs at the pre-set prop speeds and got 12 mph faster than my previous prop.*

## Contact

Contact us today to discuss your unique requirements.



### Airmaster Propellers Ltd

20 Haszard Rd, Massey  
PO Box 374, Kumeu  
Auckland, New Zealand  
Ph: +64 9 833 1794  
Fax: +64 9 833 1796  
sales@propellor.com  
www.propellor.com