

TO OUR CUSTOMERS

Cremella , January 19, 2005

**Object: New 3-bladed propeller “Idrovario”, model BAY-BLADE
New Price Lists (valid from February 1st, 2005)**

Dear Customer,

we have the pleasure to enclose The Technical Data Sheet of the new 3-bladed propeller “Idrovario”, model BAY-BLADE.

This new product is the result of one full year of activity in project, design, prototypes and tests. We have enlarged the range of our propellers and we hope that you have a new opportunity to increase your business.

The entire Alisport technical and production staff is and will be engaged in manufacturing products having high level in performances, reliability and quality.

Nevertheless, and as well known, we must communicate that up to now we have absorbed the numerous increases of costs of raw materials (especially composite materials), labour and energies; we are now obliged to modify our selling prices.

Therefore we enclose the new Price Lists, valid for deliveries starting from February 1st, 2005; we may assure you that we have tried to curb the price increase as much as possible.

As in the past, the Dealer Price List is addressed to our Customers (Manufactures or Dealers); the Retail Price List is a “suggest” list for the end-consumer, resulting from comparison with other competitors.

We are confident in your comprehension and we hope to increase our mutual cooperation.

Yours sincerely.

Alisport S.r.l.
(Eng. M. Agrati – General Manager)

NEW 3-BLADED PROPELLER **BAY-BLADE**

3-BLADED PROPELLER "IDROVARIO"
WITH HYDRAULICALLY CONTROLLED IN-FLIGHT VARIABLE PITCH



PRELIMINARY ENGINEERING DATA

Diameter : 1'620 mm (63.8 inches)

Weight : 7.8 kg (17.18 lbs)

Inertia polar momentum : approx. 4'200 kg*cm² (1'434 lbs*inch²)

Engine power : from 80 to 120 HP

Max. engine revolutions : 2'600 revs/1'

DESCRIPTION

The new 3-bladed propeller **Bay-Blade** is the result of bench and flight tests performed on our production propellers (models **Standard** and **HS**) during the last 2 years and largely installed on Ultralight and Experimental planes.

Like the other blades of our production range, also the new blade **Bay-Blade** is manufactured with **pre-preg carbon fibers** and **high temperature epoxy resins**.

The use of these materials, joined with the internal foamed polyurethane core, allows the production of blades having a **low weight** and a **very high stiffness**.

So the new 3-bladed propeller **Bay-Blade** is characterized by very reduced values of weight and inertia polar momentum; the great advantage is to have lower stress on the engine/propeller system.

We have made many projects on the aerodynamics of the blade profile and geometric twist : in spite of the small propeller disc diameter (1'620 mm – 63.8 inches), we have achieved **remarkable performances in maximum speed**, conserving good performances during the take-off and the climbing. The containment of the propeller diameter was the main feature asked by the market, with the purpose of the installation of this propeller on fast planes having a **small clearance between propeller and ground**.

First we have performed laboratory tensile and bending stress tests, then dynamic tests on the bench. Afterwards we have installed the propeller on the plane IBIS (Dyn Aero) and performed the flight tests.

If compared with other propeller installed on the same plane, the new 3-bladed propeller **Bay-Blade** has lower weight and inertia polar momentum; the performances in take-off, in climbing and, most of all, in maximum speed have showed increased values; the noise phonometric values are very limited.

The new propeller keeps all the features of the other "Idrovario" propellers; the main are :

- the possibility of feathering (the propeller can be installed on motorgliders)
- the very reliable hydraulic drive, which can be controlled by :
 - hydraulic governor
 - manual electro-hydraulic pump
 - electro-hydraulic pump controlled by an electronic governor ("constant speed propeller")
 - manual hydraulic pump

Alisport S.r.l.
(R & D Technical Office)

Cremella January 19, 2005