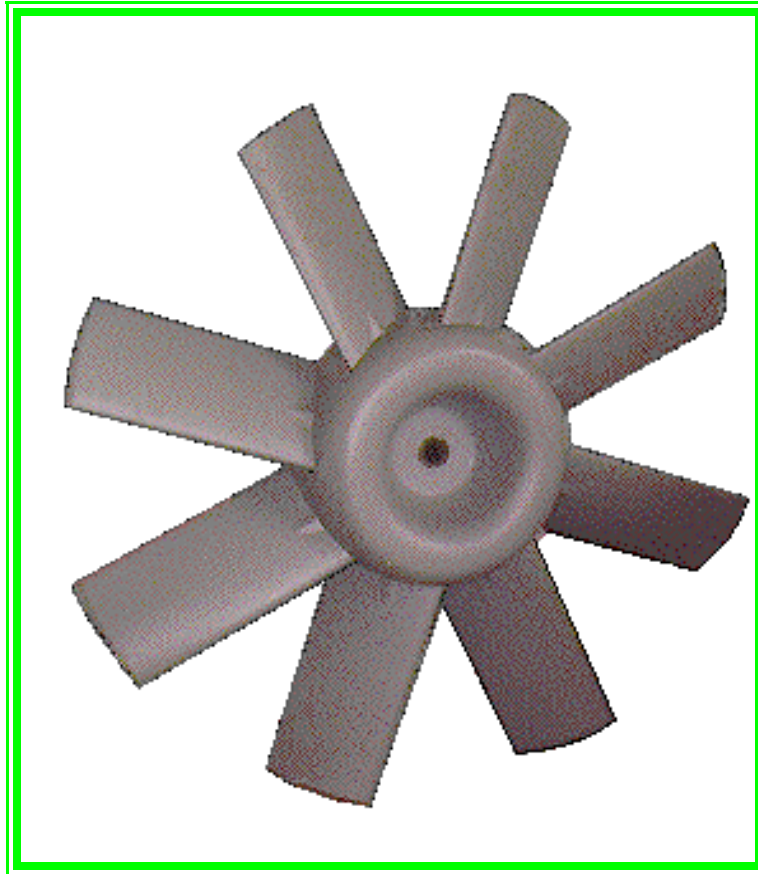


Bulletin 113
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Polyprop

Axial Flow Fans



Airfoil Propellers for Corrosive Applications

***Polymil Products
51 North Street
Le Roy, New York 14482***

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Features

The Polyprop System uses standard blades and hubs from our inventory and combines them as needed for efficient performance.

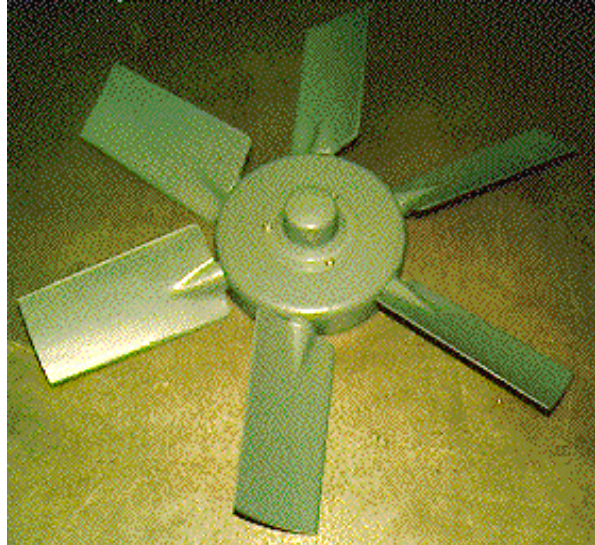
This allows us to expedite delivery and lower your costs.

Since we bore hubs and set blade pitches during assembly we can supply a propeller to your **specific** requirements.

We use a computer design program to calculate the performance Rating Curves with varying numbers of blades, pitch settings, hub diameters, and speeds, to help you select the most efficient and economical solution to your needs. Anywhere from 2 to 20 blades are possible depending on hub size and desired performance.

Unit prices are based on hub types and quantity and type of blade. Quantity discounts are available for large orders from the sales department.

We can provide replacement propellers for your existing axial fans. For replacement propellers consult us for a fan similar in hub diameter and number of blades to your existing propeller. Tell us your air flow requirement and we will tailor the pitch setting of the selection and send you a fan curve and actual price and delivery before you order. We will advise you if we feel you can benefit from another selection.



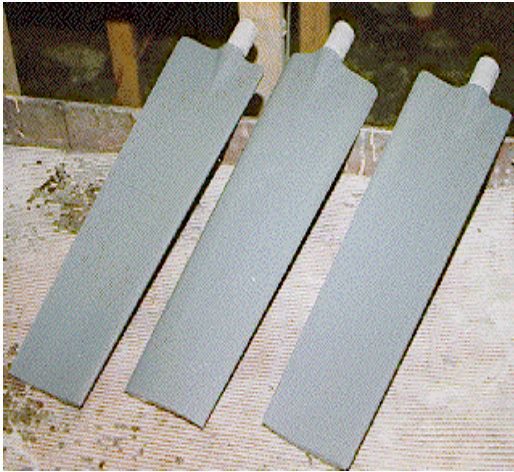
No attempt has been made to chart fan performances. There are simply too many possible combinations. You generally need to know CFM , Total and/or Static Pressure, duct diameters and, if applicable, horsepower constraints and noise considerations. No one solution will exist to meet your needs. If you have a requirement to meet please consult us.

Actual performances are adjusted to your needs during assembly. This will be particularly helpful in direct driven and replacement applications where a volume and pressure must be maintained, but speed is fixed.

No charge is made for different pitch settings on multiples of the same fan configuration. You can order three size 42" five bladed 12" hub models with 30, 32, and 35 degree pitch settings for example at no extra charge.

Utilization of guide vanes can be factored into performance estimates, as can temperature, altitude, humidity, and other density problems.

Blades



There are several models to choose from. All are “F Series” airfoil types. Designed for high efficiency operation while maintaining superior corrosion resistant characteristics.

Edges are smoothed to prevent premature erosion and loss of airfoil properties in severe applications such as pulp and paper, sewage and wastewater, and plating and chemical industries.

Resins are chosen for resistance to a wide variety of corrosive chemicals. Glass mat is die cut and pattern layered for strength and consistency, wet out with resin and press molded to achieve accurate parts.

Special resins and reinforcements can be used should you require them for temperature and corrosive situations.

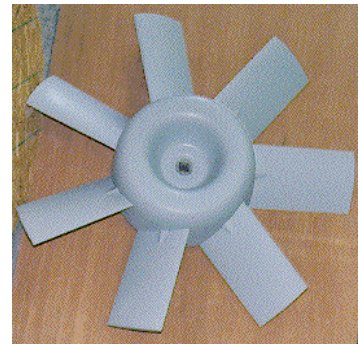
Hubs

“PK” hubs are cast in one piece monolithic blocks of glass and resin. They are machined and bored to receive the proper number of blades. They are offered with a fixed bore of your choice with or without a keyway. They also are offered with a taper bore and studs to directly receive standard taper lock bushings. Large center bores are available for expansion type bushings if you prefer.

“AF” hubs are similar to “PK”s but have a hollow airfoil cowl built around the solid core block that receives the blades. The same mounting arrangements apply.

Molded fiberglass covers are supplied to protect the mounting arrangement and a rear washer of FRP is supplied to seal against the shaft and rear of the hub where taper or expansion bushings are used. Extended shaft protectors are available where shafts must be protected from the airstream and seals are required.

The propeller is now tested and balanced by material removal and is ready for shipment.



Assembly



Blades are attached to the hub by cementing the shanks to the bored holes around the perimeter. No metals are used in the construction or assembly of the propeller. A fiberglass dowel pin holds the pitch setting while the resin cement cures.

After curing the piece is finished with a corrosion, abrasion and UV resistant gel coat.



Mounting

Several Methods of mounting to shafts are available. Our preferred method is to bore the hub to receive a standard "Browning" Split Taper Bushing. Sizes "H" thru "R1" accommodating shafts sizes from 3/8" to 3-3/4". This allows us to stock hubs ready for blade boring. Stainless steel studs are installed in our hub for tightening the bushing. They are countersunk and filled on the backside to prevent corrosion, and extend through the thickness of the hub for strength.

Fixed bores with or without keyways are another method and we can provide this if you request it.

Many favor expansion type bushings and we will bore your hub to fit your type.

A fiberglass cover of various sizes is provided along with sealant to fasten it in place. This protects the bushing and hardware from the airstream.

A fiberglass washer bored to the shaft size of your drive is furnished to be installed on the opposite side of the bushing or fixture with sealant provided to protect the rear of the hardware.

Contact us for special mounting, shaft seals, shaft sleeves, covers, and recommendations.

Advantages

High efficiency Flexibility Low noise Customized performance Quick

Delivery High strength Corrosion resistance to hostile environments

Smaller order quantities Help in selection and usage Cost planning

Special Needs

Consult our sales people for:

Special Resins Static Grounding Fillers Use With Guide vanes Custom

Designs Attachment Devices Density Corrections Usage OEM Prices

Pricing

Price is determined by the size of the hub and number of a particular style of blade for your particular selection.

Special fittings, mountings, and materials can be priced by our sales staff. Quantity discounts are applied to orders for two or more propellers of the same kind irrespective of pitch settings.

Discounts for other reasons are negotiable.



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