

MULTI-BLADE FANS TYPE H-3

Aluminium
Diameter – 156" - 168"
8 Blades

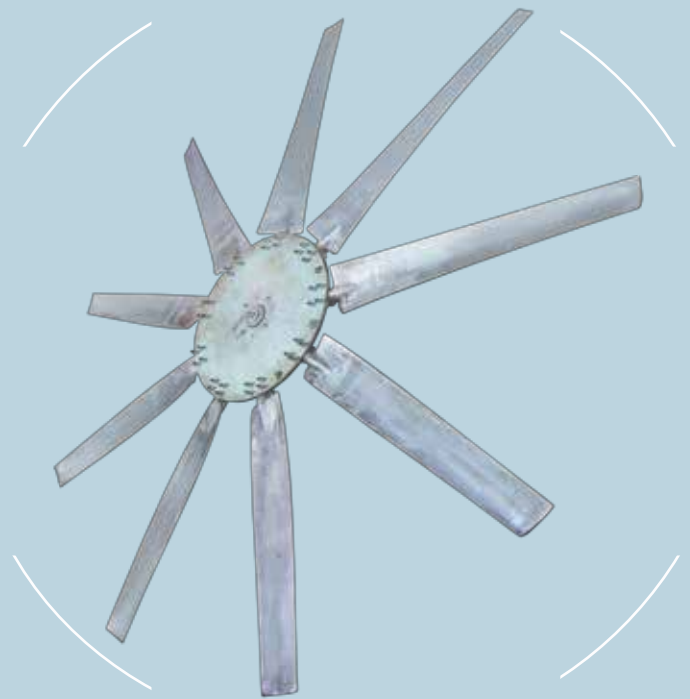


Your Full-Service
Cooling Technologies Company
www.paharpur.com

PRECISION-MANUFACTURED FAN BLADES

PAHARPUR LEADS

Each fan blade is factory balanced and precisely measured & matched with accompanying blades before shipping.



Paharpur designs and produces its own fan blades – these are factory **balanced, tested, measured and matched** to ensure stable operation, high reliability, longevity and operating economy in the rough conditions of the cooling tower.

Precision and uniformity in manufacturing helps significantly improve operating economy by giving better control over fan speed and power consumption

Precision manufacturing ensures reliable operation:

When it comes to fan efficiency, every millimetre matters – uniform width blade-tip clearance, pitch balancing and weight are of critical importance. Paharpur manufactures every blade specifically for every order to ensure uniformity among all fan blades supplied. This allows us to improve operating economy and ensure reliable performance.

Maximum customisation:

Paharpur has more than 100 fan diameters to choose from, under 100 fan types. Further, we can provide you with 100 types of fan hubs. This variety in material of construction, radius and design helps Paharpur provide the right combination for your cooling tower – giving Paharpur a truly unmatched advantage

while sizing your cooling tower. With maximum prospects for customisation, Paharpur can supply your with an industry-leading solution.

Corrosion resistance enhances service life:

Aluminium is naturally highly corrosion resistant and exhibits high durability in the moist conditions inside a cooling tower. Intelligent selection of component raw material affords a long and reliable service life to Paharpur's products.

Statically balanced fans ensure dependability:

Every fan blade supplied is statically-balanced at Paharpur's facility to ensure uniform weight distribution – this helps ensure the integrity of your cooling tower, saves fan power and helps maintain the reliability of your cooling operation.

Variable-pitch provides control over power consumption:

Paharpur gives you control over your cooling tower's power consumption by providing variable pitch blades for all fans. Control power consumption with varying heat load and wet bulb temperatures.

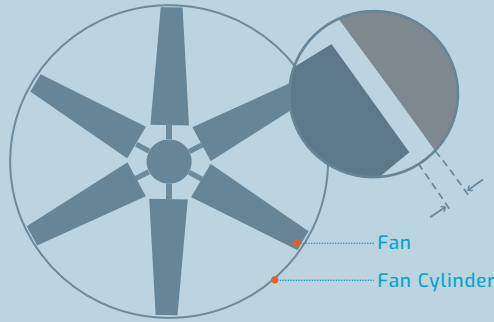
Single-piece construction for high structural integrity:

All Paharpur manufactured fan blades are made as single pieces; this helps maintain the structural integrity of the fan as joints can come under severe mechanical stress in rotating equipment. Single-piece construction means that you do not have to worry about the leading edge of the blade coming off during operation and cause damage to your equipment.

BLADE-TIP CLEARANCE

PRECISION MANUFACTURING ENSURES RELIABLE PERFORMANCE

UNIFORM BLADE-TIP-CLEARANCE
UNIFORM RADIUS OF ALL BLADES



MINIMUM BLADE-TIP CLEARANCE

The clearance between the blade-tip and cylinder is minimum for optimum utilisation of fan power.

Type H-3-9 fans of 156" and 168" diameters, with standard bores, are available for immediate shipment. Special assemblies of other diameters from 145" to 167" and/or with special bores are produced on order. The nine aluminium blades are of twisted and

tapered air foil design, precision cast in permanent moulds. The shank is machined with a safety shoulder and is protected with glass reinforced Versamid epoxy resins to prevent corrosion. U-bolts are hot dip galvanized steel. The hub is a

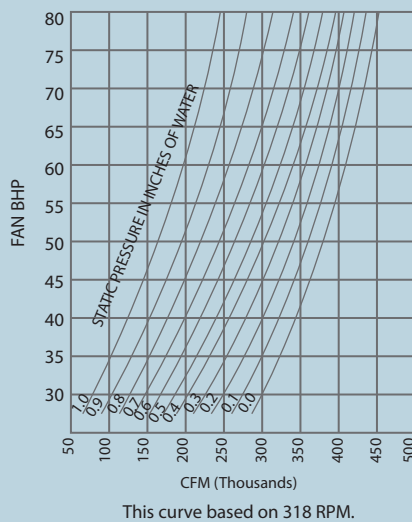
ductile iron casting, primed with a heavily loaded zinc chromate phenolic-tung oil varnish combination, and finished with Marley Grey enamel for maximum corrosion and rust resistance. Hubs are machined with a groove to accept the blade

shank safety shoulder to accurately position the blade radially. Balance weights, as required, are attached to the hub. The hub cover is dome-shaped glass reinforced polyester and attached near the periphery with stainless steel hardware.

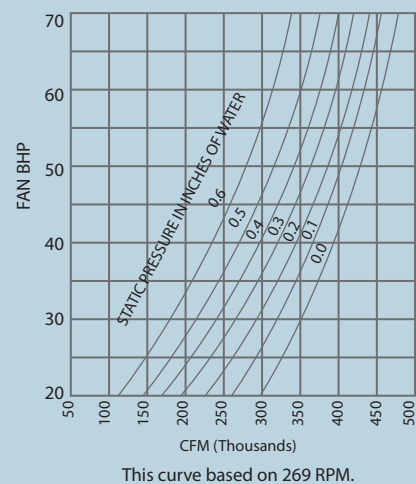
FAN PERFORMANCE DATA

The CFM shown is standard air : .075 lbs. per cubic foot equivalent to 70o dry air at sea level. Curves are based on model tests, simulating AMCA procedures. The test cylinder was eased inlet with close tip clearance. Tip clearances, fan cylinder and system characteristics can cause variation from the curve shown alongside.

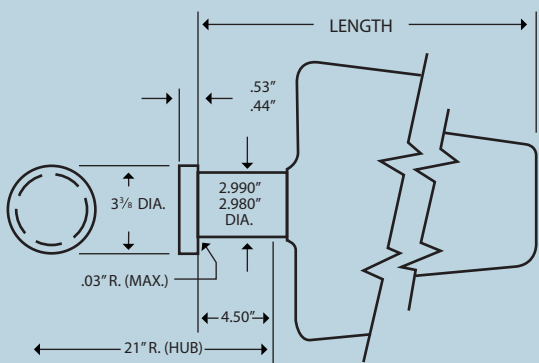
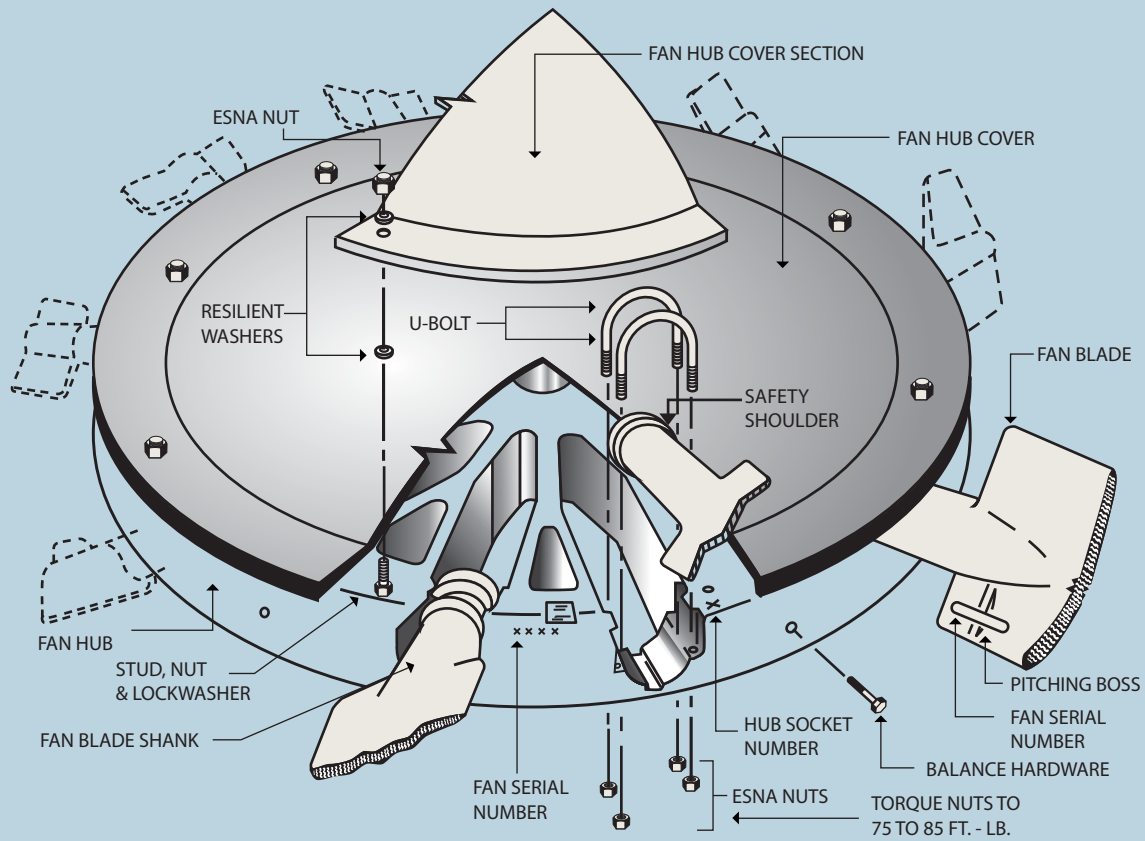
156" DIAMETER FAN



168" DIAMETER FAN



Fibre Glass Nacelle Hub Cover and Blade Seal



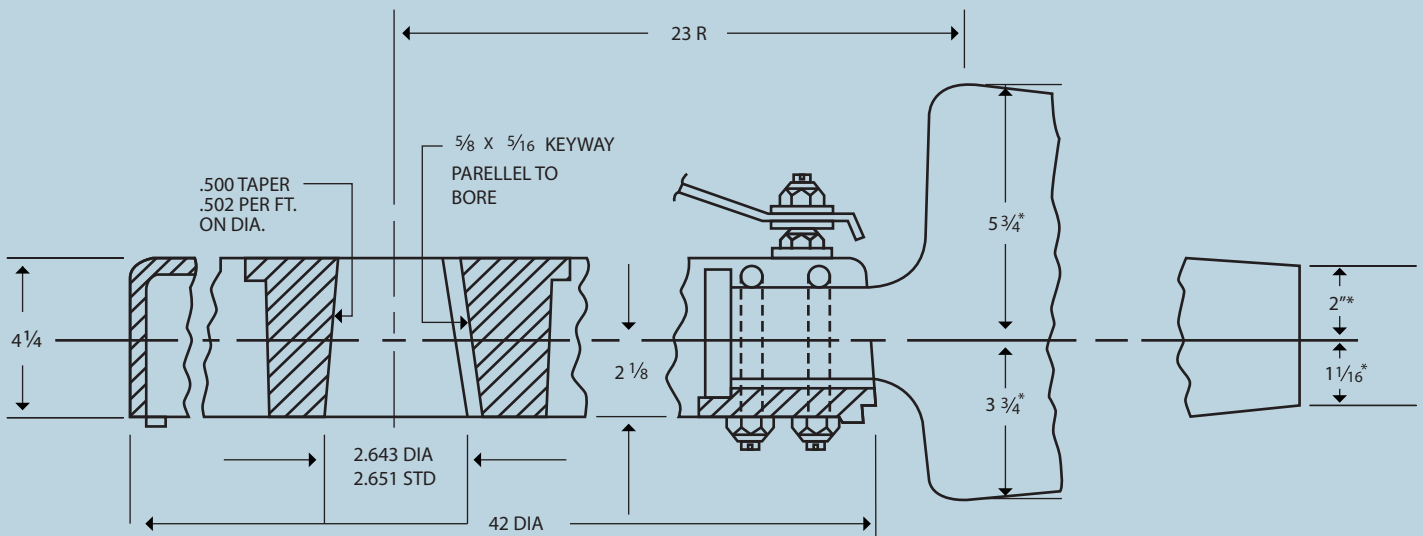
Width and thickness of blades for this assembly decrease from inboard end to tip of blade as follows:

FAN DIA.	APPROX WIDTH		MAXIMUM THICKNESS	
	MAX.	MIN.	INBOARD	OUTBOARD
156"	11"	7"	1"	17/32"
168"	11"	6-7/8"	1"	1/2"



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STANDARD CROSS SECTION SHOWING HUB, HUB COVER AND BLADE DIMENSIONS



Aerofoil design
aids in the
smooth operation
of fan blades over
many years of
duty

Refer to STATIC PRESSURE and PERFORMANCE LIMIT curves for speed, bore and key way data,
Minimum bore (without bushing) 2".

DIA.	NO. OF BLADES	BLADE LENGTH	MAX. TIP SPEED FPM	APPROX. WT. EACH BLADE	APPROX. WT. HUB	APPROX. TOTAL SHIPPING WT.	RADIAL TIP CLEARANCE	
							MIN.*	MAX.
156"	9	61-1/2"	14,000	36 lbs.	340 lbs.	660 lbs.	1/2"	7/8"
168"	9	67-1/2"	14,000	38 lbs.	340 lbs.	680 lbs.	1/2"	7/8"

Speed Range to Avoid : 246 to 272 RPM.

*Minimum clearance at tip of trailing edge.

PAHARPUR LEADS

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OSHAS 18001:2007
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PAHARPUR LEADS

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