

**University of Illinois, Department of Agricultural and Biological Engineering  
 Bioenvironmental and Structural Systems Lab  
 Circulating Fan Performance - Final Report**

**Project Number:** C09053  
**Test Date:** January 15, 2009

<b>Fan:</b>	<b>Motor:</b>	<b>Guards:</b>
Make- Termotecnica Pericoli s.r.l.	Make- SISME	Description- wire
Model- ACF18	Model - K48612 M02147	Spacing- 10 / 20 mm
Size- 18" (457 mm)	Hp- 70-100 W out	Location- intake / exhaust
Orifice $\phi$ - 470 mm	RPM- 900	
	Volts- 230-220-200	
<b>Blade:</b>	Amps- 0.55 - 0.7	
Number- 3	Hz- 50-60	
Shape- propeller	Phase- 1	
Material- aluminum	S.F. - -	

<b>Drive Sheaves:</b>	<b>Housing:</b>
Drive o.d.- direct	Material- stainless steel
Axle o.d.- drive	Depth- 430 mm

**Notes:** \*50Hz\*, Stainless steel tube fan with straightening vanes on exhaust side

**5 x D Centerline Velocity (fpm):** 570

**Test Conditions:**

T(wb): 46	Barometric pressure, recorded	29.86
T(db): 71	Barometric Pressure, corrected	29.75

\*A

D Impeller $\phi$ (in.)	Thrust (lbf)	rpm	Volts	Amps	kW	Thrust Efficiency Ratio (lbf/kW)
18.0	1.27	924	228.4	0.56	0.122	10.4