

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

**Project Number:** c12393  
**Test Date:** June 15, 2012

<b>Fan:</b>	<b>Motor:</b>	<b>Guards:</b>
Make- Termotecnica Pericoli	Make- ABB	Description- wire
Model- BKF53	Model - M2VA60B-4	Spacing- 1.3" x 1.3"
Size- 52"	Hp- 0.75 kW	Location- intake / exhaust
Orifice $\phi$ - -	RPM- 1410 // 1690	
	Volts- 380/220 // 480/240	
<b>Blade:</b>	Amps- 2/3.5 // 1.9/3.3	
Number- 3	Hz- 50 // 60	
Shape- propeller	Phase- 3	
Material- aluminum	S.F. - -	

<b>Drive Sheaves:</b>	<b>Housing:</b> Box
Drive o.d.- 4" (95 p.d.)	Material- galvanized steel
Axle o.d.- 12" (305 mm o.d.)	Depth- 7"

**Notes:** \*50 Hz test

**5 x D Centerline Velocity (fpm):** 630

**Test Conditions:**

T(wb): 65	Barometric pressure, recorded	29.41
T(db): 83	Barometric Pressure, corrected	29.27

D Impeller $\phi$ (in.)	Thrust (lbf)	rpm	Volts	Amps	kW	Thrust Efficiency Ratio (lbf/kW)
52.0	14.18	446	229.5	3.17	0.924	15.3

<b>Airflow*</b> (thrust cfm)	(thrust cfm/W)
18500	20

\*Airflow - ANSI/AMCA 230-12 Eq. 9.6 IP