

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

**Project Number:** c12073  
**Test Date:** January 12, 2012

<b>Fan:</b>	<b>Motor:</b>	<b>Guards:</b>
Make- Termotecnica Pericoli	Make- ABB	Description- wire
Model- EOR53 / 2	Model - M2TA805-4	Spacing- 0.8" x 4" (20 x 100mm)
Size- 52.1"	Hp- 2 (1.5 kW)	Location- intake / exhaust
Orifice $\varnothing$ - 52.7"	RPM- 1380	
	Volts- 230 / 400	
<b>Blade:</b>	Amps- 6.8 / 3.9	
Number- 6	Hz- 60 // 50	
Shape- propeller	Phase- 3	
Material- aluminum	S.F. - -	

<b>Drive Sheaves:</b>	<b>Housing: Box</b>
Drive o.d.- 4.4" (112 mm)	Material: galvanized steel
Axle o.d.- 12" (307 mm)	Depth- 15.5" (395 mm)

**Notes:** 50 Hz test

**5 x D Centerline Velocity (fpm):** 870

**Test Conditions:**

T(wb): 48	Barometric pressure, recorded	28.90
T(db): 70	Barometric Pressure, corrected	28.79

D Impeller $\varnothing$ (in.)	Thrust (lbf)	rpm	Volts	Amps	kW	Thrust Efficiency Ratio (lbf/kW)
52.1	26.44	483	230.1	5.83	1.719	15.4

<b>Airflow*</b> (thrust cfm)	(thrust cfm/W)
25100	14.6

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