

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

**Project Number:** c12072  
**Test Date:** January 12, 2012

<b>Fan:</b>	<b>Motor:</b>	<b>Guards:</b>
Make- Termotecnica Pericoli	Make- ABB	Description- wire
Model- EOR53 / 1.5	Model - M2VA90S-4	Spacing- 0.8" x 4" (20 x 100mm)
Size- 52.1"	Hp- 1.5 (1.1 kW)	Location- intake / exhaust
Orifice $\varnothing$ - 52.7"	RPM- 1660 // 1380	
	Volts- 380-420 / 220-240	
<b>Blade:</b>	Amps- 2.85 / 4.9	
Number- 6	Hz- 60 // 50	
Shape- propeller	Phase- 3	
Material- aluminum	S.F. - -	

<b>Drive Sheaves:</b>	<b>Housing: Box</b>
Drive o.d.- 4.0" (102 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):** 810

**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	22.89	445	230.4	4.7	1.361	16.8

<b>Airflow*</b> (thrust cfm)	(thrust cfm/W)
23400	17.2

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