

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

Project Number: c12071
Test Date: January 12, 2012

Fan:	Motor:	Guards:
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 ϕ - 52.7"	RPM- 1660 // 1380	
	Volts- 380-420 / 220-240	
Blade:	Amps- 2.85 / 4.9	
Number- 6	Hz- 60 // 50	
Shape- propeller	Phase- 3	
Material- aluminum	S.F. - -	

Drive Sheaves:	Housing: Box
Drive o.d.- 3.4" (87 mm)	Material: galvanized steel
Axle o.d.- 12" (307 mm)	Depth- 15.5" (395 mm)

Notes: 60 Hz test

5 x D Centerline Velocity (fpm): 850

Test Conditions:

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

D Impeller ϕ (in.)	Thrust (lbf)	rpm	Volts	Amps	kW	Thrust Efficiency Ratio (lbf/kW)
52.1	21.86	446	229.6	4.18	1.348	16.2

Airflow* (thrust cfm)	(thrust cfm/W)
22800	16.9

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