

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

Project Number: c12078
Test Date: January 13, 2012

Fan:	Motor:	Guards:
Make- Termotecnica Pericoli	Make- ABB	Description- wire
Model- EOR53 / 1 - 3	Model - M2VA804-4	Spacing- 0.8" x 4" (20 x 100mm)
Size- 52.1"	Hp- 1 (0.75 kW)	Location- intake / exhaust
Orifice ϕ - 52.7"	RPM- 1690 // 1410	
	Volts- 380-420/ 220-440	
Blade:	Amps- 1.8/3.3 // 2/3.5	
Number- 3	Hz- 60 // 50	
Shape- propeller	Phase- 3	
Material- aluminum	S.F. - -	

Drive Sheaves:	Housing: Box
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): 770

Test Conditions:

T(wb): 50	Barometric pressure, recorded	29.18
T(db): 72	Barometric Pressure, corrected	29.07

D Impeller ϕ (in.)	Thrust (lbf)	rpm	Volts	Amps	kW	Thrust Efficiency Ratio (lbf/kW)
52.1	18.23	450	231.5	3.24	0.953	19.1

Airflow* (thrust cfm)	(thrust cfm/W)
20800	21.8

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