

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

**Project Number:** c12082  
**Test Date:** January 13, 2012

<b>Fan:</b>	<b>Motor:</b>	<b>Guards:</b>
Make- Termotecnica Pericoli	Make- ABB	Description- wire
Model- EOR42 / 1	Model - M2VA804-4	Spacing- 0.8" x 4" (20 x 100mm)
Size- 41.2" (1047 mm)	Hp- 1 (0.75 kW)	Location- intake / exhaust
Orifice $\phi$ - 41.9" (1064 mm)	RPM- 1690 // 1410	
	Volts- 380-420/ 220-440	
<b>Blade:</b>	Amps- 1.8/3.3 // 2/3.5	
Number- 6	Hz- 60 // 50	
Shape- propeller	Phase- 3	
Material- aluminum	S.F. - -	

<b>Drive Sheaves:</b>	<b>Housing: Box</b>
Drive o.d.- 5.2" (132 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):** 900

**Test Conditions:**

T(wb): 50	Barometric pressure, recorded	29.18
T(db): 75	Barometric Pressure, corrected	29.06

D Impeller $\phi$ (in.)	Thrust (lbf)	rpm	Volts	Amps	kW	Thrust Efficiency Ratio (lbf/kW)
41.2	16.35	584	229.8	3.3	0.957	17.1

<b>Airflow*</b> (thrust cfm)	(thrust cfm/W)
15600	16.3

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