

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

Project Number: C09050
Test Date: January 15, 2009

Fan:

Make- Termotecnica Pericoli s.r.l
Model- ACF22
Size- 22" (559 mm)
Orifice $\varnothing$ - 570 mm

Motor:

Make- SISME
Model - K48615 M02129
Hp- 150 - 200 W out
RPM- 900
Volts- 230-220-200
Amps- 1.2 - 1.5
Hz- 50 - 60
Phase- 1
S.F. - -

Guards:

Description- wire
Spacing- 10 / 20 mm
Location- intake / exhaust

Blade:

Number- 3
Shape- propeller
Material- aluminum

Drive Sheaves:

Drive o.d.- direct
Axle o.d.- drive

Housing:

Material- stainless steel
Depth- 428 mm

Notes: *50 Hz*, Stainless steel tube fan with straightening vanes on exhaust side

5 x D Centerline Velocity (fpm): 620

Test Conditions:

T(wb): 47 Barometric pressure, recorded 29.86
T(db): 72 Barometric Pressure, corrected 29.74

D Impeller $\varnothing$ (in.)	Thrust (lbf)	rpm	Volts	Amps	kW	Thrust Efficiency Ratio (lbf/kW)
21.9	2.58	904	229.5	1.26	0.27	9.6

Airflow* (thrust cfm)	(thrust cfm/W)
3250	12

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