

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

Project Number: c22336
 Test Date: June 6, 2022

Fan:	Make- Termotecnica Pericoli	Motor:	Make- ABB	Guards:	Description- wire
	Model- ACF21P-250		Model - 3GAA072907-ASE		Spacing- 1" concentric
	Size- 21"		Hp- 0.19 // 0.25		Location- intake / exhaust
	Orifice \varnothing - 20.3"		RPM- 1430 // 1685		
			Volts- 230/400 // 260/460		
Blade:			Amps- 1.0/0.59 // 1.1/0.66		
	Number- 3		Hz- 50 // 60		
	Shape- propeller		Phase- 3		
	Material- poly		S.F. - -		
Drive Sheaves:		Housing:	Tube		
	Drive o.d.- direct		Material- Poly		
	Axle o.d.- drive		Depth- 12"		

Notes: * 50 Hz test

5 x D Centerline Velocity (fpm): 1190

Test Conditions:

T(wb): 64	Barometric pressure, recorded	29.19
T(db): 76	Barometric Pressure, corrected	29.07

D Impeller \varnothing (in.)	Thrust (lbf)	Thrust Efficiency		rpm	Volts	Amps	kW	Airflow* (thrust cfm)	Efficacy (thrust cfm/W)
		Ratio (lbf/kW)							
20.0	3.94	16.0		1448	229.9	1.03	0.246	3730	15.2

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