

University of Illinois Department of Agricultural and Biological Engineering
Bioenvironmental and Structural Systems Lab
Final Report

Project Number: 10433
Test Date: September 15, 2010

Fan:

Make- *Schaefer*
 Model- *576CF112G-3-HE*
 Blade dia.- *57"*
 Orifice dia.- *58"*

Blade:

Number- *6*
 Shape- *propeller*
 Material- *galvanized steel*
 Pitch- *-*
 Clearance- *0.5"*

Drive Sheaves:

Drive dia.- *2.4" o.d.*
 Axle dia.- *10.3" o.d.*

Motor:

Make- *Leeson*
 Cat. #: *117513.00*
 Hp- *1.5*
 RPM- *1750*
 Volts- *208-230/460*
 Amps- *4.6-4.8/2.4*
 Hz- *60*
 Phase- *3*
 S. F.- *1.25*

Housing:

Material- *fiberglass*
 Intake area- *58.5" x 59"*
 Discharge- *58" dia.*
 Depth- *28.5"*
0

Shutter:

Material- *aluminum*
 # Doors- *15 per column*
 # Columns- *2*
 Door length *29.6"*
 Location- *intake*

Guards:

Description- *wire*
 Spacing- *1.5" concentric*
 Location- *exhaust*

Discharge Cone:

Depth- *25.5"*
 Minor dia.- *58"*
 Major dia.- *66.5"*

Notes: *0*

Test Conditions:

T(wb):	65	Barometric pressure, recorded	29.37
T(db):	79	Barometric Pressure, corrected	29.24

Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
0.00	27800	376	230.4	3.80	1077	25.8
0.05	25800	375	230.1	3.89	1118	23.1
0.10	24200	374	229.9	3.94	1142	21.2
0.15	21100	374	229.9	3.98	1156	18.3
0.20	14900	375	230.2	3.88	1112	13.4
0.25	9400	373	231.4	4.04	1189	7.9
0.30	4000	371	231.3	4.22	1272	3.2