

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

Project Number: 08253
Test Date: August 26, 2008

Fan: Make- <i>Hired Hand</i> Model- 6603-7133 Blade dia.- 54.5" Orifice dia.- 55.2" Blade: Number- 3 Shape- <i>propeller</i> Material- <i>galvanized steel</i> Pitch- - Clearance- 0.4" Drive Sheaves: Drive dia.- 3.95" o.d. Axle dia.- 10.3"	Motor: Make- <i>WEG</i> Model- <i>1UMEICPNXX 504E</i> Hp- 1.5 RPM- 1725/1425 Volts- 115/208-230//220 Amps- 13.0/7.0-6.5//8.0 Hz- 60/50 Phase- 1 S. F.- 1.5 Housing: Material- <i>galvanized steel</i> Intake area- 59.8" x 60" Discharge- 55.2" dia. Depth- 14"	Shutter: Material- <i>galvanized steel</i> # Doors- 2 # Columns- - Door length - Location- <i>exhaust</i> Guards: Description- <i>wire</i> Spacing- 2" x 4" / 2" concentric Location- <i>intake / exhaust</i> Discharge Cone: Depth- 35.5" Minor dia.- 55.2" Major dia.- 71.4"
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Notes: 0

Test Conditions:

T(wb): 65	Barometric pressure, recorded	29.34
T(db): 78	Barometric Pressure, corrected	29.21

Static						
Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
0.04	30600	654	230.0	7.25	1485	20.6
0.05	30400	654	230.1	7.33	1507	20.1
0.10	28900	652	230.0	7.66	1577	18.3
0.15	27500	651	229.9	7.96	1644	16.8
0.20	26100	650	230.0	8.23	1708	15.3
0.25	24100	649	230.0	8.55	1777	13.6
0.30	22000	647	229.5	8.86	1844	11.9