

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

Project Number: 08252
Test Date: August 26, 2008

Fan:		Motor:		Shutter:	
Make-	<i>Hired Hand</i>	Make-	<i>WEG</i>	Material-	<i>galvanized steel</i>
Model-	<i>6603-7088</i>	Model-	<i>1UMEICPNXX 504E</i>	# Doors-	<i>2</i>
Blade dia.-	<i>54.5"</i>	Hp-	<i>1.5</i>	# Columns-	<i>-</i>
Orifice dia.-	<i>55.2"</i>	RPM-	<i>1725/1425</i>	Door length -	<i>-</i>
		Volts-	<i>115/208-230//220</i>	Location-	<i>exhaust</i>
		Amps-	<i>13.0/7.0-6.5//8.0</i>		
Blade:		Hz-	<i>60/50</i>	Guards:	
Number-	<i>3</i>	Phase-	<i>1</i>	Description-	<i>wire</i>
Shape-	<i>propeller</i>	S. F.-	<i>1.5</i>	Spacing-	<i>2" x 4" / 2" concentric</i>
Material-	<i>galvanized steel</i>			Location-	<i>intake / exhaust</i>
Pitch-	<i>-</i>				
Clearance-	<i>0.4"</i>	Housing:		Discharge Cone:	
		Material-	<i>galvanized steel</i>	Depth-	<i>35.5"</i>
Drive Sheaves:		Intake area-	<i>59.8" x 60"</i>	Minor dia.-	<i>55.2"</i>
Drive dia.-	<i>3.8" o.d.</i>	Discharge-	<i>55.2" dia.</i>	Major dia.-	<i>71.4"</i>
Axle dia.-	<i>10.3"</i>	Depth-	<i>14"</i>		

Notes: 0

Test Conditions:

T(wb):	65	Barometric pressure, recorded	29.34
T(db):	78.5	Barometric Pressure, corrected	29.21

Static

Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
0.00	30400	627	229.8	6.35	1273	23.9
0.05	29000	626	230.5	6.68	1354	21.4
0.10	27800	625	230.2	6.95	1422	19.5
0.15	26200	624	230.0	7.23	1480	17.7
0.20	24500	623	229.7	7.49	1536	15.9
0.25	22300	622	230.1	7.76	1598	14.0
0.30	20100	621	230.0	8.00	1659	12.1