

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

Project Number: 12423
 Test Date: June 22, 2012

Fan:	Motor:	Shutter:
Make- <i>Mynfan</i>	Make- <i>Fanpac</i>	Material- <i>galvanized steel</i>
Model- <i>52EB1125</i>	Model- <i>A1125-4</i>	# Doors- <i>2</i>
Blade dia.- <i>52.7</i>	Hp- <i>1.5</i>	# Columns- <i>na</i>
Orifice dia.- <i>53.3"</i>	RPM- <i>1750</i>	Door length -
	Volts- <i>230</i>	Location- <i>exhaust</i>
	Amps- <i>6.3</i>	
Blade:	Hz- <i>60</i>	Guards:
Number- <i>3</i>	Phase- <i>1</i>	Description- <i>wire</i>
Shape- <i>propeller</i>	S. F.- <i>1.4</i>	Spacing- <i>2 " x 4" / 2.6" concentric</i>
Material- <i>galvanized steel</i>		Location- <i>intake / exhaust</i>
Pitch- <i>-</i>		
Clearance- <i>0.3"</i>	Housing:	Discharge Cone:
	Material- <i>galvanized steel</i>	Depth- <i>35.4"</i>
Drive Sheaves:	Intake area- <i>55" x 56"</i>	Minor dia.- <i>53.3"</i>
Drive dia.- <i>3.5"</i>	Discharge- <i>53.3"</i>	Major dia.- <i>63.7"</i>
Axle dia.- <i>8.9"</i>	Depth- <i>20" screen</i>	
	<i>0</i>	

Notes: 0

Test Conditions:

T(wb): 65	Barometric pressure, recorded	29.35
T(db): 79	Barometric Pressure, corrected	29.22

							SI Units			
Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt	Static Pressure (Pa)	Airflow (m^3/hr.)	(m^3/hr)/W	W/1000m^3/hr
0.00	29600	657	230.7	6.02	1359	21.8	0	50200	37	27
0.05	28200	655	230.7	6.30	1427	19.8	12	48000	33.6	30
0.10	26500	654	230.3	6.57	1490	17.8	25	45000	30.2	33
0.15	24500	653	230.4	6.79	1545	15.9	37	41700	27	37
0.20	22500	652	230.2	7.00	1596	14.1	50	38300	24	42
0.25	20200	651	230.1	7.15	1628	12.4	62	34300	21.1	47
0.30	17900	650	230.1	7.28	1662	10.8	75	30400	18.3	55