

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

Project Number: 12421
 Test Date: June 21, 2012

Fan:		Motor:		Shutter:	
Make- <i>Mynfan</i>		Make- <i>Fanpac</i>		Material- <i>galvanized steel</i>	
Model- <i>54EB1125</i>		Model- <i>A1125-4</i>		# Doors- <i>2</i>	
Blade dia.- <i>54.6"</i>		Hp- <i>1.5</i>		# Columns- <i>na</i>	
Orifice dia.- <i>55"</i>		RPM- <i>1750</i>		Door length -	
		Volts- <i>230</i>		Location- <i>exhaust</i>	
Blade:		Amps- <i>6.3</i>			
Number- <i>3</i>		Hz- <i>60</i>		Guards:	
Shape- <i>propeller</i>		Phase- <i>1</i>		Description- <i>wire</i>	
Material- <i>galvanized steel</i>		S. F.- <i>1.4</i>		Spacing- <i>2 " x 4" / 2.6" concentric</i>	
Pitch- <i>-</i>				Location- <i>intake / exhaust</i>	
Clearance- <i>0.2"</i>		Housing:		Discharge Cone:	
		Material- <i>galvanized steel</i>		Depth- <i>37.5"</i>	
Drive Sheaves:		Intake area- <i>60" x 60"</i>		Minor dia.- <i>55"</i>	
Drive dia.- <i>3.5" o.d.</i>		Discharge- <i>55"</i>		Major dia.- <i>66.8"</i>	
Axle dia.- <i>8.9" o.d.</i>		Depth- <i>20" screen</i>			
		<i>0</i>			

Notes: 0

Test Conditions:

T(wb): 65	Barometric pressure, recorded	29.31
T(db): 78	Barometric Pressure, corrected	29.18

							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	32400	645	229.8	6.51	1475	22.0	0	55000	37.3	27
0.05	30900	643	229.8	6.90	1568	19.7	12	52400	33.4	30
0.10	28800	641	229.6	7.33	1671	17.2	25	48900	29.2	34
0.15	26700	639	229.3	7.76	1770	15.1	37	45300	25.6	39
0.20	24400	637	230.0	8.17	1871	13.1	50	41500	22.2	45
0.25	21800	635	230.3	8.58	1972	11.1	62	37100	18.8	53
0.30	17400	633	230.4	9.06	2087	8.4	75	29600	14.2	70