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

Project Number: 23073
Test Date: April 10, 2023

Fan:
Make- *Eurusfan*
Model- *VFE2-24HP-A3PM-CR*
Blade dia.- *26"*
Orifice dia.- *26.6"*

Blade:
Number- *6*
Shape- *propeller*
Material- *plastic*
Pitch- -
Clearance- *0.3"*

Drive Sheaves:
Drive dia.- *direct*
Axle dia.- *drive*

Motor:
Make- *EURUS AgriTec*
Model- *TFE5-100M3-150B3DV*
Hp- *750 Watt*
RPM- *1500*
Volts- *380-480*
Amps- *1.7*
Hz- *50 // 60*
Phase- *3*
S. F.- -

Housing:
Material- *Fiberglass*
Intake area- *30.2" x 30.2"*
Discharge- *26.6" dia.*
Depth- *19.3"*

Shutter:
Material- *plastic*
Doors- *9 per column*
Columns- *2*
Door length *15"*
Location- *intake*

Guards:
Description- *wire*
Spacing- *2" concentric*
Location- *exhaust*

Discharge Cone:
Depth- *23.2"*
Minor dia.- *26.6"*
Major dia.- *32.4"*

Notes: **380 VAC, 3 phase 50 Hz input*

Test Conditions:
T(wb) F: 55.2
T(db) F: 72.1 Barometric Pressure 29.57 (In. Hg)

Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt	SI Units Static Pressure (Pa)	Airflow (m^3/hr.)	(m^3/hr)/W	W/1000m^3/hr
0.00	**9450**	1500	380.8	1.55	758	**12.5**	0	16100	21.2	47
0.05	**9220**	1501	380.8	1.60	785	**11.7**	12	15700	19.9	50
0.10	**8990**	1500	381.4	1.61	788	**11.4**	25	15300	19.4	52
0.15	**8750**	1500	381.2	1.67	828	**10.6**	37	14900	18	56
0.20	**8550**	1500	381.2	1.71	856	**10.0**	50	14500	17	59
0.25	**8330**	1501	382.4	1.73	849	**9.8**	62	14200	16.7	60
0.30	**8110**	1501	381.2	1.78	901	**9.0**	75	13800	15.3	65
0.40	**7500**	1501	381.6	1.80	916	**8.2**	100	12700	13.9	72
0.50	**6460**	1501	381.6	1.79	912	**7.1**	125	11000	12	83
0.60	**5310**	1501	381.7	1.83	940	**5.6**	149	9000	9.6	104