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

Project Number: 23097
Test Date: April 13, 2023

Fan:
Make- *Eurusfan*
Model- *VFE2-56HF-A3PM-CBA*
Blade dia.- *56.4"*
Orifice dia.- *56.8"*

Blade:
Number- *3*
Shape- *propeller*
Material- *plastic*
Pitch-
Clearance- *0.2"*

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

Motor:
Make- *EURUS AgriTec*
Model- *TFE5-100M8-75BXDV*
Hp- *2200 Watt*
RPM- *720*
Volts- *380-480*
Amps- *4.5*
Hz- *50 // 60*
Phase- *3*
S. F.- *-*

Housing:
Material- *Fiberglass*
Intake area- *63" x 63"*
Discharge- *56.8" dia.*
Depth- *27.5*

Shutter: *Butterfly damper w/ electric opener*
Material- *plastic*
Doors- *2*
Columns- *-*
Door length *-*
Location- *exhaust*

Guards:
Description- *wire*
Spacing- *2" / 4" concentric*
Location- *exhaust*

Discharge Cone:
Depth- *41*
Minor dia.- *56.8"*
Major dia.- *68.5"*

Notes: **415 VAC, 3 phase 50 Hz input*

Test Conditions:
T(wb) F: 57.8
T(db) F: 76 Barometric Pressure 29.14 (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	Above chamber capacity									
0.11	**40800**	720	415.0	3.64	2353	**17.4**	27	69400	29.5	34
0.15	**39300**	720	415.3	3.74	2423	**16.2**	37	66700	27.5	36
0.20	**37200**	720	415.5	3.86	2501	**14.9**	50	63200	25.3	40
0.25	**35000**	720	415.8	3.95	2561	**13.7**	62	59500	23.2	43
0.30	**32500**	720	415.9	4.01	2595	**12.5**	75	55200	21.3	47
0.35	**29800**	720	415.9	4.04	2616	**11.4**	87	50600	19.4	52
0.40	**26600**	720	415.9	4.04	2621	**10.2**	100	45300	17.3	58