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

Project Number: 23076
Test Date: April 10, 2023

Fan:
Make- *Eurusfan*
Model- *VFE2-24HO-B3PM-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- *TFE5-100M2-95B3DVB3*
Hp- *370 Watt*
RPM- *1000*
Volts- *220-240*
Amps- *1.5*
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: **230 VAC, 3 phase 60 Hz input*

Test Conditions:
T(wb) F: 56.2
T(db) F: 73.4
Barometric Pressure 29.53 (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	**7880**	999	229.8	0.97	348	**22.6**	0	13400	38.5	26
0.05	**7570**	999	229.5	1.02	366	**20.7**	12	12900	35.1	28
0.10	**7230**	999	229.4	1.07	383	**18.9**	25	12300	32.1	31
0.15	**6860**	999	229.1	1.12	401	**17.1**	37	11600	29	34
0.20	**6410**	999	229.1	1.15	418	**15.3**	50	10900	26	38
0.25	**5820**	999	229.1	1.18	425	**13.7**	62	9900	23.3	43
0.30	**4700**	999	229.6	1.18	424	**11.1**	75	8000	18.8	53