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

Project Number: 23094
Test Date: April 12, 2023

Fan:
Make- *Eurusfan*
Model- *VFE2-56HE-B3PM-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- *TFE5-100M6-70BXDVB3*
Hp- *1500 Watt*
RPM- *710*
Volts- *220 - 240*
Amps- *5.6*
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: **230 VAC, 3 phase 60 Hz input*

Test Conditions:
T(wb) F: 58.2
T(db) F: 75.7
Barometric Pressure 29.17 (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	**35000**	710	230.0	3.07	1140	**30.7**	0	59400	52.1	19
0.05	**33300**	710	230.0	3.32	1232	**27.0**	12	56600	45.9	22
0.10	**31800**	710	229.5	3.54	1317	**24.1**	25	54000	41	24
0.15	**29900**	710	229.4	3.75	1400	**21.4**	37	50800	36.3	28
0.20	**27900**	710	229.3	3.97	1475	**18.9**	50	47400	32.1	31
0.25	**25800**	710	229.7	4.12	1544	**16.7**	62	43800	28.3	35
0.30	**23500**	710	229.6	4.20	1575	**14.9**	75	39900	25.3	39