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

Project Number: 23095
Test Date: April 13, 2023

Fan:
Make- *Eurusfan*
Model- *VFE2-56HE-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- *TFE5-100M6-70BXDV*
Hp- *1500 Watt*
RPM- *690*
Volts- *380-480*
Amps- *3.2*
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: **380 VAC, 3 phase 50 Hz input*

Test Conditions:
T(wb) F: 57
T(db) F: 74
Barometric Pressure 29.18 (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	**34900**	710	379.5	1.95	1143	**30.5**	0	59300	51.8	19
0.05	**33400**	710	379.9	2.10	1230	**27.1**	12	56700	46.1	22
0.10	**31700**	710	380.1	2.26	1320	**24.0**	25	53800	40.8	25
0.15	**29800**	710	380.5	2.40	1406	**21.2**	37	50700	36.1	28
0.20	**27800**	710	380.8	2.53	1488	**18.7**	50	47300	31.8	31
0.25	**25800**	710	381.2	2.62	1546	**16.7**	62	43800	28.4	35
0.30	**23300**	710	381.2	2.69	1581	**14.8**	75	39600	25.1	40