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

Project Number: 24133
Test Date: February 19, 2024

Fan:
Make- *Eurusfan*
Model- *VFA2-56HO-A3IM-CBM*
Blade dia.- *56.4"*
Orifice dia.- *56.8"*

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

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

Motor:
Make- *EURUS AgriTec*
Model- *YFE3-100L3-8BX*
Hp- *1500 Watt*
RPM- *705*
Volts- *380*
Amps- *4.4*
Hz- *50*
Phase- *3*
S. F.- *1.15*

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

Shutter: *Butterfly damper*
Material- *plastic*
Doors- *2*
Columns- -
Door length -
Location- *exhaust*

Guards:
Description- *wire*
Spacing- *1.3" x 3.4" / 4" concentric*
Location- *intake / exhaust*

Discharge Cone:
Depth- *42.1"*
Minor dia.- *56.8"*
Major dia.- *68.5"*

Notes: ** 50 Hz test*

Test Conditions:
T(wb) F: 54
T(db) F: 75.8
Barometric Pressure 29.31 (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	**39400**	712	380.9	4.23	1789	**22.0**	0	66900	37.4	27
0.05	**37300**	709	380.9	4.36	1890	**19.7**	12	63300	33.5	30
0.10	**35500**	706	380.9	4.47	1981	**17.9**	25	60300	30.4	33
0.15	**33400**	703	380.9	4.57	2060	**16.2**	37	56800	27.6	36
0.20	**31300**	701	380.9	4.65	2130	**14.7**	50	53200	25	40
0.25	**29100**	699	380.9	4.72	2183	**13.3**	62	49400	22.6	44
0.30	**26300**	698	380.9	4.77	2217	**11.9**	75	44700	20.2	50