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

Project Number: 23099
Test Date: April 13, 2023

Fan:
Make- *Eurusfan*
Model- *VFE2-36HO-A3PM-CR*
Blade dia.- *37.7"*
Orifice dia.- *38.1"*

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

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

Motor:
Make- *EURUS AgriTec*
Model- *TFE5-100M4-85BXDV*
Hp- *750 Watt*
RPM- *990*
Volts- *380-480*
Amps- *1.7*
Hz- *50 // 60*
Phase- *3*
S. F.- -

Housing:
Material- *Fiberglass*
Intake area- *40.3" x 40.3"*
Discharge- *38.1" dia.*
Depth- *21.3"*

Shutter:
Material- *plastic*
Doors- *12 per column*
Columns- *2*
Door length *20"*
Location- *intake*

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

Discharge Cone:
Depth- *27.2"*
Minor dia.- *38.1"*
Major dia.- *45"*

Notes: **380 VAC, 3 phase 50 Hz input*

Test Conditions:
T(wb) F: 55.9
T(db) F: 75.7 Barometric Pressure 29.03 (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	**16530**	980	379.4	1.70	794	**20.8**	0	28100	35.4	28
0.05	**15750**	980	379.7	1.75	825	**19.1**	12	26800	32.4	31
0.10	**15040**	980	380.0	1.83	854	**17.6**	25	25600	29.9	33
0.15	**14350**	980	380.2	1.85	892	**16.1**	37	24400	27.3	37
0.20	**13480**	980	380.5	1.89	913	**14.8**	50	22900	25.1	40
0.25	**12630**	980	380.7	1.93	931	**13.6**	62	21500	23	43
0.30	**11550**	980	380.8	1.96	951	**12.1**	75	19600	20.6	48