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

Project Number: 23075
Test Date: April 10, 2023

Fan:
Make- *Eurusfan*
Model- *VFE2-24HO-A3PM-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- *TFE5-100M2-95B3DV*
Hp- *370 Watt*
RPM- *1000*
Volts- *380-480*
Amps- *0.9*
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: **380 VAC, 3 phase 50 Hz input*

Test Conditions:
T(wb) F: 55.9
T(db) F: 73.1 Barometric Pressure 29.54 (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	**7890**	1000	380.7	0.66	336	**23.5**	0	13400	39.9	25
0.05	**7560**	1000	380.7	0.69	363	**20.8**	12	12900	35.4	28
0.10	**7200**	1000	380.7	0.74	383	**18.8**	25	12200	31.9	31
0.15	**6820**	1000	380.8	0.77	401	**17.0**	37	11600	28.9	35
0.20	**6410**	1000	381.1	0.79	418	**15.3**	50	10900	26	38
0.25	**5790**	1000	381.1	0.82	420	**13.8**	62	9800	23.4	43
0.30	**4490**	1000	381.1	0.81	420	**10.7**	75	7600	18.2	55