

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

Project Number: 07462
 Test Date: November 19, 2007

Fan:
 Make- *Better Air*
 Model- *MPF-3800*
 Blade dia.- *36.4"*
 Orifice dia.- *37"*

Motor:
 Make- *Vostermans*
 Model- *8E92*
 Hp-
 RPM-
 Volts-
 Amps-
 Hz- *60*
 Phase- *1*
 S. F.-

Shutter:
 Material- *plastic*
 # Doors- *12 per column*
 # Columns- *2*
 Door length- *20.8"*
 Location- *intake*

Blade:
 Number- *3*
 Shape- *propeller*
 Material- *plastic*
 Pitch- *-*
 Clearance- *0.3"*

Housing:
 Material- *plastic*
 Intake area- *41" x 41"*
 Discharge- *37" dia.*
 Depth- *27.8" top*
27" bottom

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

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

Discharge Cone:
 Depth- *none*
 Minor dia.- *-*
 Major dia.- *-*

Notes:

Test Conditions:

T(wb): 65 Barometric pressure, recorded 29.33
 T(db): 79.5 Barometric Pressure, corrected 29.20

# Open Nozzle	Noz. Dia. (inch)	Pressure		Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
		Drop (in.H2O)	Static (in.H2O)						
6	8	1.54	0.00	10516	676	230.2	3.84	791	13.3
6	8	1.31	0.04	9679	672	230.5	3.85	792	12.2
6	8	1.25	0.05	9473	672	230.4	3.84	793	11.9
6	8	0.98	0.10	8363	679	230.5	3.80	787	10.6
6	8	0.68	0.15	6978	694	230.5	3.71	775	9.0
3	8	1.68	0.20	5484	701	230.4	3.66	761	7.2
3	8	0.65	0.25	3411	681	230.0	3.75	781	4.4
1	8	0.95	0.30	1372	640	230.0	3.95	804	1.7