

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

Project Number: 07483  
 Test Date: November 20, 2007

**Fan:**  
 Make- *Better Air*  
 Model- *MPF-2401*  
 Blade dia.- *25"*  
 Orifice dia.- *25.3"*

**Blade:**  
 Number- *5*  
 Shape- *propeller*  
 Material- *plastic*  
 Pitch- *-*  
 Clearance- *0.2"*

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

**Motor:**  
 Make- *Vostermans*  
 Model- *6E63*  
 Hp- *0.7 kW*  
 RPM- *1000*  
 Volts- *240*  
 Amps- *3.1*  
 Hz- *60*  
 Phase- *1*  
 S. F.- *-*

**Housing:**  
 Material- *plastic*  
 Intake area- *29.2" x 29.4"*  
 Discharge- *25.3" dia.*  
 Depth- *20.3"*

**Shutter:**  
 Material- *plastic*  
 # Doors- *9 per column*  
 # Columns- *2*  
 Door length- *14.8"*  
 Location- *intake*

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

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

**Notes:**

**Test Conditions:**

T(wb): 65 Barometric pressure, recorded 29.24  
 T(db): 82 Barometric Pressure, corrected 29.10

# Open Nozzle	Noz. Dia. (inch)	Pressure		Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
		Drop (in.H2O)	Static (in.H2O)						
4	8	1.61	0.00	7185	1006	230.0	3.56	789	9.1
4	8	1.49	0.05	6922	1000	230.1	3.57	795	8.7
4	8	1.36	0.10	6613	990	229.5	3.65	805	8.2
4	8	1.24	0.15	6313	983	230.0	3.68	814	7.8
4	8	1.11	0.20	5972	978	230.0	3.72	818	7.3
4	8	0.96	0.25	5553	975	229.8	3.73	820	6.8
4	8	0.82	0.30	5115	976	230.1	3.74	819	6.2