

University of Illinois Department of Agricultural Engineering
Bioenvironmental and Structural Systems Lab
Fan Description Form

Project Number: 97183

Test Date: June 26, 1997

Fan
Make: Acme

Motor
Make: Magnetek

Model #: BDR48J-A

Model #: 8-181782-01

Manufacturer: Acme

H.P.: 1.0

Blade Size: 48"

Amps: 4.4/8.8

Orifice Dia.: 48.5"

Volts: 230/115

Blade
Number: 4

RPM: 1725

Shape: propeller

S.F.: 1.00

Material: galv. Steel

Drive Pulley Dia.: AK30

Pitch: -

Axle Pulley Dia.: AL114

Clearance: 0.3"

Housing
Material: galvanized steel

Shutter
Material: Aluminum

Intake Area: 52.5"x54"

Number Doors: 13 per row

Discharge Area:

Number Columns: 2

Depth: 34" top
20.8" bottom

Door Length: 25.8"

Guards
Description: welded wire

Location: intake

Spacing: 1" x 2"

Location: exhaust

Other Attachments: _____

TEST RESULTS

ACME BDR48J-A

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 97183	0.00	475	20400	21.7
Fan description:	0.05	474	19300	19.9
48" belt drive, 1 hp Magnetek 8-181782-01	0.10	474	18100	18.0
motor, galv. steel slant housing,	0.15	473	16800	16.2
aluminum shutter and guard	0.20	472	15500	14.7
	0.25	471	14000	12.8
	0.30	469	11400	9.9
