

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

Project Number: 97182

Test Date: June 26, 1997

Fan
Make: Acme

Motor
Make: A.O. Smith

Model #: BDR48J-A

Model #: K56A40B83

Manufacturer: Acme

H.P.: 1

Blade Size: 48"

Amps: 11/5.5

Orifice Dia.: 48.5"

Volts: 115/208-230

Blade
Number: 4

RPM: 1725/1425

Shape: propeller

S.F.: 1.30

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: 97182	0.00	476	20400	21.7
Fan description:	0.05	476	19400	20.0
48" belt drive, 1 hp AO Smith K56A40B83	0.10	476	18200	18.1
motor, galv. steel slant housing,	0.15	475	16900	16.4
aluminum shutter and guard	0.20	473	15600	14.7
	0.25	472	14100	12.9
	0.30	471	11200	9.6
