

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

Project Number: 97188

Test Date: June 26, 1997

Fan
Make: Acme

Motor
Make: Magnetek

Model #: BDR48JL-C

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.: AK27

Pitch: none

Axle Pulley Dia.: AL114

Clearance: 0.3"

Housing
Material: galv. steel

Shutter
Material: Aluminum

Intake Area: 52.5"x54"

Number Doors: 13 per row

Discharge Area: 51.5"x51.3"

Number Columns: 2

Depth: 34"top/20.8"bottom

Door Length: 25.8"

Guards
Description: wire

Location: intake

Spacing: none

Location: Exhaust

Other Attachments: Discharge Cone 59.5"o.d,22.5" deep

TEST RESULTS

ACME BDR48JL-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 97188	0.00	420	19800	30.9
Fan description:	0.05	421	18500	27.0
48" Belt drive 1 hp Magnetek 8-181782-01	0.10	419	17100	23.8
motor, galvanized steel slant housing,	0.15	417	15200	20.2
aluminum shutter, guard and discharge cone	0.20	418	12900	16.4
	0.25	416	8200	10.1
	0.30	414	5900	6.8