

**University of Illinois Department of
Agricultural Engineering
BESS Lab**

Project Number: 98166

Test Date: September 29, 1998

Fan

Make: Acme

Model #: DDPS50J-C

Manufacturer: Acme

Blade Size: 50"

Orifice Dia.: 50.5"

Blade

Number: 4

Shape: propeller

Material: Stainless steel

Pitch:

Clearance: 0.3"

Shutter

Material: Aluminum

of Doors: 13 per column

of Columns: 2

Door Length: 26.8"

Location: intake

Other Attachments:

Discharge Cone 27" deep, 65" o.d., 50.5" i.d.

Motor

Make: Magnetek

Model #: 8-181782

H.P.: 1.0

Amps: 4.4 / 8.8

Volts: 230/115

RPM: 1725

S.F.: 1.00

Drive

Drive Pulley Dia. Ak25

Axle Pulley Dia.: AL94

Housing

Material: fiberglass

Intake Area: 57.5"x 55.5"

Discharge Area: 50.5" dia

Depth: 30" top
16" bottom

Guards

Description: Wire

Spacing: 2.1" concentric

Location: exhaust

TEST RESULTS

ACME DDPS50J-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98166	0.00	459	24700	25.1
Fan description:	0.05	458	23500	22.5
50" Belt drive 1 hp Magnetek 8-181782	0.10	456	22100	19.9
motor, fiberglass housing, aluminum shutter,	0.15	455	20600	17.8
guard and discharge cone	0.20	454	18500	15.5
	0.25	452	15900	12.9
	0.30	451	11000	8.7
