

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

Project Number: 98173

Test Date: September 30, 1998

Fan

Make: Acme

Model #: DDPG50J1-C

Manufacturer: Acme

Blade Size: 50"

Orifice Dia.: 50.5"

Blade

Number: 4

Shape: propeller

Material: galvanized 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 #: C 782

H.P.: 1.0

Amps: 4.3 / 8.6

Volts: 230/115

RPM: 1725

S.F.: 1.40

Drive

Drive Pulley Dia. Ak26

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 DDPG50J1-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98173	0.00	480	25700	23.5
Fan description:	0.05	479	24700	21.5
50" Belt drive 1.0 hp Magnetek C782	0.10	477	23500	19.5
motor, fiberglass housing, aluminum shutter,	0.15	476	22100	17.7
guard and discharge cone	0.20	475	20400	15.8
	0.25	475	18300	13.9
	0.30	473	15400	11.5
