

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

Project Number: 98174

Test Date: September 30, 1998

Fan

Make: Acme

Model #: DDPG50J1-CR

Manufacturer: Acme

Blade Size: 50"

Orifice Dia.: 50.5"

Blade

Number: 4

Shape: propeller

Material: galvanized steel

Pitch:

Clearance: 0.3"

Shutter - Roll Seal

Material: curtain

of Doors: 1

of Columns: 1

Door Length: -

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.: Ak94

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-CR

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98174	0.00	480	26000	24.1
Fan description:	0.05	478	24900	21.7
50" Belt drive 1.0 hp Magnetek C782	0.10	477	23700	19.8
motor, fiberglass housing, Roll Seal shutter,	0.15	476	22400	18.0
guard and discharge cone	0.20	474	20800	16.3
	0.25	474	18500	14.1
	0.30	473	15900	12.0
