

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

Project Number: 98170

Test Date: September 30, 1998

Fan

Make: Acme

Model #: DDPG50K-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: GE

Model #: 5KCR48WNO139S

H.P.: 1.5

Amps: 18.2/9.1

Volts: 115/208-230

RPM: 1725

S.F.: 1.00

Drive

Drive Pulley Dia. Ak28

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 DDPG50K-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98170	0.00	515	27400	19.8
Fan description:	0.05	514	26400	18.1
50" Belt drive 1.5 hp GE 5KCR48WN0139S	0.10	513	25300	16.7
motor, fiberglass housing, aluminum shutter,	0.15	512	24200	15.4
guard and discharge cone	0.20	510	22900	14.3
	0.25	510	21200	12.9
	0.30	509	19000	11.4
