

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

Project Number: 98161

Test Date: September 29, 1998

Fan

Make: Acme

Model #: DDPG50J -C

Manufacturer: Acme

Blade Size: 50"

Orifice Dia.: 50.5"

Blade

Number: 4

Shape: propeller

Material: galv. 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: Baldor

Model #: 35E743T255G1

H.P.: 1

Amps: 8.8/4.8-4.4

Volts: 115/208-230

RPM: 1725

S.F.: 1.0

Drive

Drive Pulley Dia. 2.5" o.d. (Ak25)

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 DDPG50J-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98161	0.00	468	25100	24.2
Fan description:	0.05	467	23900	21.9
50" Belt drive 1 hp Baldor 35E74T255G1	0.10	466	22700	19.8
motor, fiberglass housing, aluminum shutter,	0.15	465	21400	18.1
guard and discharge cone	0.20	464	19400	15.9
	0.25	465	17200	13.8
	0.30	464	13700	11.0
