

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

Project Number: 98171

Test Date: September 30, 1998

Fan

Make: Acme

Model #: DDPG50JL-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: Baldor

Model #: 35E743T255G1

H.P.: 1.0

Amps: 8.8/4.8-4.4

Volts: 115/208-230

RPM: 1725

S.F.: 1.00

Drive

Drive Pulley Dia. Ak23

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 DDPG50JL-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98171	0.00	398	21400	31.0
Fan description:	0.05	396	20100	27.7
50" Belt drive 1.0 hp Baldor 35E743T255G1	0.10	395	18600	24.2
motor, fiberglass housing, aluminum shutter,	0.15	395	16600	20.9
guard and discharge cone	0.20	395	12400	15.3
	0.25	395	8500	10.3
