

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

Project Number: 98172

Test Date: September 30, 1998

Fan

Make: Acme

Model #: DDPS50JL-C

Manufacturer: Acme

Blade Size: 50"

Orifice Dia.: 50.5"

Blade

Number: 4

Shape: propeller

Material: Stainless 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 DDPS50JL-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98172	0.00	397	21600	32.7
Fan description:	0.05	397	20100	28.3
50" Belt drive 1.0 hp Baldor 35E743T255G1	0.10	396	18400	24.5
motor, fiberglass housing, aluminum shutter,	0.15	396	16200	20.8
guard and discharge cone	0.20	395	13100	16.4
	0.25	394	8200	9.8
