

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

Project Number: 98175

Test Date: September 30, 1998

Fan

Make: Acme

Model #: DDPS50J1-CR

Manufacturer: Acme

Blade Size: 50"

Orifice Dia.: 50.5"

Blade

Number: 4

Shape: propeller

Material: Stainless 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 DDPS50J1-CR

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98175	0.00	481	26200	25.6
Fan description:	0.05	479	24900	22.8
50" Belt drive 1.0 hp Magnetek C782	0.10	479	23700	20.6
motor, fiberglass housing, Roll Seal shutter,	0.15	477	22300	18.6
guard and discharge cone	0.20	477	20500	16.5
	0.25	475	18200	14.3
	0.30	475	15400	12.0
