

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

Project Number: 98142

Test Date: June 1, 1998

Fan

Make: Acme

Model #: DDPS48J-C

Manufacturer: Acme

Blade Size: 48"

Orifice Dia.: 48.5"

Blade

Number: 4

Shape: propeller

Material: stainless steel

Pitch: -

Clearance: 0.3"

Shutter

Material: aluminum

of Doors: 14 per row

of Columns: 2

Door Length: 25.8"

Location: intake

Other Attachments:

Discharge cone 59" o.d., 48.5" i.d., 22.5" deep

Motor

Make: Magnetek

Model #: C782

H.P.: 1.0

Amps: 4.3/8.6

Volts: 230/115

RPM: 1725

S.F.: 1.40

Drive

Drive Pulley Dia. AK34

Axle Pulley Dia.: AL114

Housing

Material: fiberglass

Intake Area: 53" x 56"

Discharge Area: 48.5" dia.

Depth: 27" top
14" bottom

Guards

Description: wire

Spacing: 2.1" concentric

Location: exhaust

TEST RESULTS

ACME DDPS48J-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98142	0.00	505	22400	26.0
Fan description:	0.05	504	21400	23.2
48" Belt drive 1 hp Magnetek C782	0.10	502	20300	20.9
motor, fiberglass housing, aluminum shutter,	0.15	502	19100	18.7
guard and discharge cone	0.20	501	17800	16.7
	0.25	500	15900	14.4
	0.30	498	13600	12.1
