

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

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**Project Number:** 98111

**Test Date:** May 26, 1998

**Fan**

*Make:* Acme

*Model #:* DDPG48J-C

*Manufacturer:* Acme

*Blade Size:* 48"

*Orifice Dia.:* 48.5"

**Blade**

*Number:* 4

*Shape:* propeller

*Material:* galvanized 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 DDPG48J-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98111	0.00	502	23600	24.4
Fan description:	0.05	501	22500	22.2
48" Belt drive 1 hp Magnetek C782	0.10	499	21300	20.0
motor, fiberglass housing, aluminum shutter,	0.15	498	20000	17.9
guard and discharge cone	0.20	496	18300	15.8
	0.25	495	16500	13.7
	0.30	493	14000	11.5

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