

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

Project Number: 99074

Test Date: April 28, 1999

Fan

Make: Pruden Ventilation

Model #: FG48-C

Manufacturer: Pruden

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

of Columns: 2

Door Length: 25.8"

Location: intake

Other Attachments:

discharge cone 24.5" deep, 48.5" i.d., 58" o.d.

Motor

Make: AO Smith

Model #: k56A40B83

H.P.: 1

Amps: 11/5.5

Volts: 115/208-230

RPM: 1725

S.F.: 1.3

Drive

Drive Pulley Dia. 3" o.d.

Axle Pulley Dia.: 11" o.d.
AL114

Housing

Material: fiberglass

Intake Area: 51" x 54.5"

Discharge Area: 48.5"

Depth: 26" top, 12" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

PRUDEN VENTILATION FG48-C

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99074	0.00	462	21,700	24.3
Fan description:	0.05	460	20,500	21.6
48" belt drive, 1 hp AO Smith K56A40B83	0.10	460	19,300	19.5
motor, fiberglass housing, aluminum shutter,	0.15	458	17,800	17.2
guard and discharge cone	0.20	458	15,900	15.0
	0.25	457	13,500	12.6
	0.30	457	8,100	7.6
