

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

Project Number: 99071

Test Date: April 21, 1999

Fan

Make: Hired Hand

Model #: Part # 6603-5580

Manufacturer: Hired Hand

Blade Size: 48.5"

Orifice Dia.: 49"

Blade Stock C6403-5010
positioned 0.6" from exit face of orifice
Number: 3

Shape: propeller

Material: galv. Steel

Pitch: -

Clearance: 0.3"

Shutter **6611-5006**
Material: aluminum

of Doors: 12

of Columns: 2

Door Length: 25.6"

Location: intake

Other Attachments:
discharge cone 32.5" deep, 49" i.d., 60" o.d.
Part # 6650-1010

Motor

Make: Magnetek

Model #: C782

H.P.: 1

Amps: 4.3/8.6

Volts: 230/115

RPM: 1725/1425 (60/50 Hz)

S.F.: 1.4

Drive

Drive Pulley Dia. 3.5" o.d.

Axle Pulley Dia.: 10.3" o.d.

Housing

Material: galvanized steel

Intake Area:

Discharge Area: 49" dia.

Depth: 31" top
22.8" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

HIRED HAND 6603-5580

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99071	0.00	600	24,700	22.4
Fan description:	0.05	598	23,200	20.0
48" belt drive, 1 hp Magnetek C782 motor,	0.10	596	21,600	17.7
Galv. steel slant housing, aluminum	0.15	593	19,900	15.4
shutter 6611-5006, guard and discharge cone	0.20	590	17,600	13.1
	0.25	590	11,900	8.7
	0.30	581	6,000	3.8
