

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

Project Number: 99185

Fan

Make: American Coolair

Model #: MNBFH48L

Manufacturer: American Coolair

Blade Size: 49.0" dia.

Orifice Dia.: 49.4"

Blade

Number: 6

Shape: propeller

Material: painted steel

Pitch: -

Clearance: 0.2"

Shutter

Material: aluminum

of Doors: 17 per column

of Columns: 2

Door Length: 25.3"

Location: intake

Other Attachments:

Test Date: September 24, 1999

Motor

Make: Emerson

Model #: T63ZZBBA-800

H.P.: 1.0

Amps: 11.0/5.5

Volts: 115/208-230

RPM: 1725

S.F.: 1.3

Drive

Drive Pulley Dia. 3.8" o.d.
AK39

Axle Pulley Dia.: 16" o.d.

Housing

Material: galvanized steel

Intake Area: 51.5" x 52.5"

Discharge Area: 54.5" x 54.5"

Depth: 30.4" top
21.5" bottom

Guards

Description: wire

Spacing: 1" x 2" concentric

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBFH48L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99185	0.00	407	21,500	19.0
Fan description:	0.05	406	20,200	17.4
49" belt drive, 1 hp Emerson T63ZZBBA-800	0.10	406	18,900	15.9
motor, galv. Steel slant housing, aluminum	0.15	405	17,300	14.3
Shutter and guard	0.20	406	14,900	12.4
	0.25	405	12,400	10.3
	0.30	404	7,100	5.8