

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

Project Number: 99176

Test Date: September 23, 1999

Fan

Make: American Coolair

Motor

Make: Emerson

Model #: MNBREC48L

Model #: T63ZZBBA-800

Manufacturer: American Coolair

H.P.: 1.0

Blade Size: 49.3" dia.

Amps: 11.0/5.5

Orifice Dia.: 49.8"

Volts: 115/208-230

Blade

Number: 4

RPM: 1725

Shape: propeller

S.F.: 1.3

Material: galvanized steel

Drive

Drive Pulley Dia. 2.8" o.d.

AK28

Pitch: -

Axle Pulley Dia.: 9.5" o.d.

Clearance: 0.3"

Housing

Shutter

Material: galvanized steel

Material: aluminum

Intake Area: 51.5" x 52.5"

of Doors: 17 per column

Discharge Area: 54.5" x 54.5"

of Columns: 2

Depth: 30.4" top
21.5" bottom

Door Length: 25.3"

Guards

Location: intake

Description: wire

Other Attachments:

Discharge cone 28.5" deep, 49.8" i.d., 61.5" o.d.

Spacing: 1"x2"

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBREC48L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99176	0.00	486	21,500	24.3
Fan description:	0.05	484	20,200	21.9
49" belt drive, 1 hp Emerson T63ZZBBA-800	0.10	483	19,000	19.6
motor, galv. steel slant housing, aluminum	0.15	481	17,500	17.8
Shutter, guard and discharge cone	0.20	480	14,800	14.7
	0.25	480	12,200	12.0
	0.30	-	6,800	6.3
