

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

Project Number: 01104

Test Date: May 22, 2001

Fan

Make: American Coolair

Model #: MNCFBEC48L

Manufacturer: American Coolair

Blade Size: 48.8" dia.

Orifice Dia.: 49.3"

Blade

Number: 6

Shape: propeller

Material: steel

Pitch: -

Clearance: 0.3"

Shutter

Material: plastic

of Doors: 16 per column

of Columns: 3

Door Length: 17.1"

Location: intake

Other Attachments:

discharge cone 29.3" deep, 49.3" i.d., 60" o.d.
belt tensioner

Motor

Make: Emerson

Model #: T63ZZBBA-800

H.P.: 1

Amps: 11/5.5

Volts: 115/230

RPM: 1725

S.F.: 13.2/6.6 SFA

Drive

Drive Pulley Dia. 3.4" o.d.
Browning AK34

Axle Pulley Dia.: 15.6" o.d.

Housing

Material: galvanized steel

Intake Area: 57" x 56.3"

Discharge Area: 49.3" dia.

Depth: 34.3" top
25" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNCFBEC48L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01104	0.00	381	21,900	24.9
Fan description:	0.05	380	20,500	22.2
49" belt drive, 1hp Emerson T63ZZBBA-800	0.10	380	18,400	19.2
motor, galvanized steel slant housing,,	0.15	379	16,200	16.1
plastic shutter, guard and discharge cone	0.20	379	12,700	12.3
	0.25	379	7,600	7.7
