

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

Project Number: 01103

Test Date: May 22, 2001

Fan

Make: American Coolair

Model #: MNCFBC48L

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. 3.8" o.d.
Browning AK39

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 MNCFBC48L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01103	0.00	413	23,800	22.5
Fan description:	0.05	412	22,600	20.4
49" belt drive, 1hp Emerson T63ZZBBA-800	0.10	411	20,800	17.9
motor, galvanized steel slant housing,,	0.15	411	18,800	15.5
plastic shutter, guard and discharge cone	0.20	410	16,200	12.9
	0.25	409	12,700	10.0
	0.30	410	7,900	6.4
