

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

Project Number: 99174

Fan

Make: American Coolair

Model #: MNBRC48M1P

Manufacturer: American Coolair

Blade Size: 49.3" dia.

Orifice Dia.: 49.8"

Blade

Number: 4

Shape: propeller

Material: galvanized steel

Pitch: -

Clearance: 0.3"

Shutter

Material: aluminum

of Doors: 17 per column

of Columns: 2

Door Length: 25.3"

Location: intake

Other Attachments:

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

Test Date: September 23, 1999

Motor

Make: Emerson

Model #: T63ZZCDZ-1257

H.P.: 1.5

Amps: 13.2/6.7 - 15.5/7.8

Volts: 115/230

RPM: 1725/1425

S.F.: 1.3

Drive

Drive Pulley Dia. 3.5" o.d.

AK34

Axle Pulley Dia.: 9.5" 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: 2" concentric

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBRC48M1P

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99174	0.00	598	25,800	16.5
Fan description:	0.05	595	25,000	15.5
49" belt drive, 1.5 hp Emerson T63ZZCDZ-1257	0.10	595	24,000	14.6
motor, galv. steel slant housing, aluminum	0.15	594	23,000	13.7
Shutter, guard and discharge cone	0.20	592	21,800	12.7
	0.25	589	20,000	11.3
	0.30	588	17,800	9.9
