

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

Project Number: 99188

Fan

Make: American Coolair

Model #: MNBF48M1P

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 #: 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. 4.3" o.d.

AK44

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 MNBF48M1P

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99188	0.00	461	23,900	15.7
Fan description:	0.05	460	23,100	14.9
49" belt drive, 1.5 hp Emerson T63ZZCDZ-1257	0.10	460	21,800	13.8
motor, galv. Steel slant housing, aluminum	0.15	459	20,600	12.8
Shutter and guard	0.20	458	19,100	11.7
	0.25	458	17,200	10.6
	0.30	458	15,100	9.2