

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

Project Number: 99194

Fan

Make: American Coolair

Model #: MNCFA48M1P

Manufacturer: American Coolair

Blade Size: 48.2" dia.

Orifice Dia.: 48.6"

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: 2" concentric

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNCFA48M1P

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99194	0.00	462	23,800	16.3
Fan description:	0.05	462	22,700	15.1
48" belt drive, 1.5 hp Emerson T63ZZCDZ-1257	0.10	461	21,600	14.2
motor, galv. steel slant housing, aluminum	0.15	461	20,400	13.1
Shutter and guard	0.20	460	19,100	12.0
	0.25	459	17,400	10.8
	0.30	459	15,100	9.3