

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

Project Number: 99193

Fan

Make: American Coolair

Model #: MNCFAC48M1P

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:

Discharge cone 28.5" deep, 48.6" i.d., 61" o.d.

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 MNCFAC48M1P

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99193	0.00	464	25,500	17.9
Fan description:	0.05	462	24,400	16.7
48" belt drive, 1.5 hp Emerson T63ZZCDZ-1257	0.10	461	23,200	15.4
motor, galv. steel slant housing, aluminum	0.15	461	21,500	14.1
Shutter, guard and discharge cone	0.20	460	20,000	12.8
	0.25	459	17,700	11.1
	0.30	459	15,700	9.8