

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

Project Number: 01183

Test Date: August 21, 2001

Fan

Make: American Coolair

Model #: MNBR52M

Manufacturer: American Coolair

Blade Size: 53"

Orifice Dia.: 53.4"

Blade

Number: 4

Shape: propeller

Material: galvanized steel

Pitch: -

Clearance: 0.2"

Shutter w/ bell mouth inlet

Material: aluminum

of Doors: 14

of Columns: 1

Door Length: 54.6"

Location: intake

Other Attachments:

Belt tensioner

Motor

Make: Emerson

Model #: T63ZZCDZ-1257

H.P.: 1.5

Amps: 13.2/6.7

Volts: 115/230

RPM: 1725

S.F.: -

Drive

Drive Pulley Dia. 2.8"
AK28

Axle Pulley Dia.: 9.5"

Housing

Material: galvanized steel

Intake Area: 56" x 57"

Discharge Area: 53.4" dia.

Depth: 30.3" top
21.3" bottom

Guards

Description: wire

Spacing: 2" x 2"

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBR52M

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01183	0.00	503	26,200	20.0
Fan description:	0.05	501	25,000	18.3
52" belt drive, 1.5 hp Emerson T63ZZCDZ-1257	0.10	500	23,700	16.9
motor, galvanized steel slant housing,,	0.15	499	22,300	15.4
aluminum shutter and guard	0.20	497	20,600	13.9
	0.25	496	18,900	12.5
	0.30	495	16,400	10.5
