

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

Project Number: 01209

Test Date: August 22, 2001

Fan

Make: American Coolair

Model #: MNBRC52M

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:

Discharge cone, 32.5" deep, 53.4" i.d., 64" o.d.
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" concentric

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBRC52M

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01209	0.00	506	29,000	24.9
Fan description:	0.05	504	27,600	22.5
53" belt drive fan, 1.5 hp Emerson T63ZZCDZ-1257	0.10	502	26,000	20.1
motor, galvanized steel slant housing,	0.15	500	24,500	18.2
aluminum bell mouth shutter, guard and	0.20	499	22,400	15.9
discharge cone	0.25	497	20,400	14.0
	0.30	495	18,200	12.1
