

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

Project Number: 01210

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: plastic

of Doors: 16

of Columns: 3

Door Length: 17.1"

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: 01210	0.00	505	28,400	23.6
Fan description:	0.05	502	26,900	21.4
53" belt drive fan, 1.5 hp Emerson T63ZZCDZ-1257	0.10	500	25,300	19.0
motor, galvanized steel slant housing,	0.15	499	23,400	16.8
plastic bell mouth shutter, guard and	0.20	496	21,400	14.8
discharge cone	0.25	495	18,100	12.0
	0.30	494	14,600	9.4
