

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

Project Number: 01218

Test Date: August 22, 2001

Fan

Make: American Coolair

Model #: MNBREC52L

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: AO Smith

Model #: 327P775

H.P.: 1

Amps: 11.0/5.5

Volts: 115/208-230

RPM: 1725

S.F.: 1.3
13.2/6.6 SFA

Drive

Drive Pulley Dia. 2.3"
AK23

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 MNBREC52L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01218	0.00	411	23,400	30.9
Fan description:	0.05	409	21,500	26.6
53" belt drive fan, 1 hp AO Smith 327P775	0.10	408	19,200	22.4
motor, galvanized steel slant housing,	0.15	405	15,100	16.6
plastic bell mouth shutter, guard and	0.20	404	10,800	11.7
discharge cone	0.25	401	6,900	7.0
