

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

Project Number: 01216

Test Date: August 22, 2001

Fan

Make: American Coolair

Model #: MNBRC52L

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: 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. 2.6"
MA26

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 MNBRC52L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01216	0.00	472	27,400	28.0
Fan description:	0.05	469	25,900	24.6
53" belt drive fan, 1 hp AO Smith 327P775	0.10	466	24,300	21.7
motor, galvanized steel slant housing,	0.15	464	22,100	18.8
aluminum bell mouth shutter, guard and	0.20	462	20,000	16.3
discharge cone	0.25	460	16,300	12.6
	0.30	450	6,400	4.3
