

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

Project Number: 01193

Test Date: August 21, 2001

Fan

Make: American Coolair

Model #: MNBRE52L

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: AO Smith

Model #: 327P775

H.P.: 1

Amps: 11.0/5.5

Volts: 115/208-230

RPM: 1725

S.F.: 1.3

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" x 2"

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBRE52L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01193	0.00	412	21,900	27.3
Fan description:	0.05	411	20,300	24.2
52" belt drive, 1 hp AO Smith 327P775	0.10	409	18,600	21.2
motor, galvanized steel slant housing,,	0.15	408	16,300	17.9
aluminum shutter and guard	0.20	406	12,700	13.3
	0.25	403	7,600	7.6
