

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

Test Date: August 22, 2001

Project Number: 01217

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

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"

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

Shutter w/ bell mouth inlet

Material: aluminum

of Doors: 14

of Columns: 1

Door Length: 54.6"

Location: intake

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

Other Attachments:

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

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: 01217	0.00	413	24,400	34.4
Fan description:	0.05	411	22,600	29.4
53" belt drive fan, 1 hp AO Smith 327P775	0.10	409	20,500	24.9
motor, galvanized steel slant housing,	0.15	407	18,100	20.8
aluminum bell mouth shutter, guard and	0.20	403	10,200	10.8
discharge cone	0.25	398	3,400	3.2
