

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

Project Number: 01220

Test Date: August 22, 2001

Fan

Make: American Coolair

Model #: MNBRC52K

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 #: 92GC868

H.P.: 3/4

Amps: 6.8/3.4

Volts: 115/208-230

RPM: 1725

S.F.: 1.3

Drive

Drive Pulley Dia. 2.3"
MA23

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 MNBRC52K

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01220	0.00	402	23,700	35.8
Fan description:	0.05	400	21,700	30.2
53" belt drive fan, 3/4 hp AO Smith 92GC868	0.10	397	19,200	24.8
motor, galvanized steel slant housing,	0.15	394	15,900	19.2
aluminum bell mouth shutter, guard and	0.20	390	8,900	10.0
discharge cone	0.25	383	3,200	3.2
