

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

Project Number: 01219

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: 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 #: 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: 01219	0.00	402	22,900	33.3
Fan description:	0.05	399	20,800	27.9
53" belt drive fan, 3/4 hp AO Smith 92GC868	0.10	397	18,400	23.0
motor, galvanized steel slant housing,	0.15	395	14,200	16.5
plastic bell mouth shutter, guard and	0.20	393	9,200	10.4
discharge cone	0.25	390	5,900	6.3
