

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

Project Number: 01196

Test Date: August 21, 2001

Fan

Make: American Coolair

Model #: MNBR52K

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 #: 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" x 2"

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBR52K

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01196	0.00	398	21,100	29.5
Fan description:	0.05	395	19,500	25.9
52" belt drive, 3/4 hp AO Smith 92GC868	0.10	393	17,700	22.5
motor, galvanized steel slant housing,,	0.15	390	14,700	18.0
aluminum shutter and guard	0.20	388	10,200	11.8
	0.25	381	3,000	3.1
