

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

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**Project Number:** 01195

**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:* plastic

*# of Doors:* 16

*# of Columns:* 3

*Door Length:* 17.1"

*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: 01195	0.00	396	20,600	28.1
Fan description:	0.05	393	18,600	24.3
52" belt drive, 3/4 hp AO Smith 92GC868	0.10	391	16,400	20.4
motor, galvanized steel slant housing,,	0.15	388	13,500	16.3
plastic shutter and guard	0.20	392	9,700	11.0
	0.25	385	5,400	5.9

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