

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

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**Project Number:** 01222

**Test Date:** August 23, 2001

**Fan**

*Make:* American Coolair

*Model #:* MNEFC52K

*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"  
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

**Guards**

*Description:* wire

*Spacing:* 2" concentric

*Location:* exhaust

# TEST RESULTS

## AMERICAN COOLAIR MNEFC52K

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01222	0.00	405	21,600	30.2
Fan description:	0.05	402	19,300	25.1
53" belt drive, 3/4 hp AO Smith 92GC868	0.10	400	16,800	20.8
motor, galvanized steel slant housing,	0.15	398	13,400	16.0
plastic bell mouth shutter, guard	0.20	397	8,800	10.3
and discharge cone	0.25	393	5,900	6.4

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