

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

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**Project Number:** 01173

**Test Date:** August 20, 2001

**Fan**

*Make:* American Coolair

*Model #:* FGBCE52L

*Manufacturer:* American Coolair

*Blade Size:* 52.8

*Orifice Dia.:* 53.1"

**Blade**

*Number:* 3

*Shape:* propeller

*Material:* cast aluminum

*Pitch:* -

*Clearance:* 0.1"

**Shutter w/ bell mouth inlet**

*Material:* plastic

*# of Doors:* 16

*# of Columns:* 3

*Door Length:* 17.1"

*Location:* intake

**Other Attachments:**

Discharge cone 29" deep, 53.1" i.d., 62.5" o.d.  
Belt tensioner

**Motor**

*Make:* AO Smith

*Model #:* 327P775

*H.P.:* 1

*Amps:* 11.0/5.5

*Volts:* 115/208-230

*RPM:* 1725

*S.F.:* 1.3

**Drive**

*Drive Pulley Dia.* 2.5"  
AK25

*Axle Pulley Dia.:* 9.5"

**Housing**

*Material:* fiberglass

*Intake Area:* 56" x 56"

*Discharge Area:* 53.1" dia.

*Depth:* 24" top  
21.5" bottom

**Guards**

*Description:* wire

*Spacing:* 2" concentric

*Location:* exhaust

## TEST RESULTS

### AMERICAN COOLAIR FGBCE52L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01173	0.00	448	25,500	29.5
Fan description:	0.05	446	23,200	25.6
52" belt drive, 1 hp AO Smith 327P775	0.10	445	20,600	22.2
motor, fiberglass housing, plastic shutter,	0.15	445	16,800	18.1
Guard and discharge cone	0.20	447	9,900	11.5

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