

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

Project Number: 01176

Test Date: August 20, 2001

Fan

Make: American Coolair

Model #: FGBC52L

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. 2.7"
AK27

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 FGBC52L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01176	0.00	484	27,700	26.1
Fan description:	0.05	482	25,800	23.4
52" belt drive, 1 hp AO Smith 327P775	0.10	481	23,600	20.7
motor, fiberglass housing, plastic shutter,	0.15	480	20,600	17.8
Guard and discharge cone	0.20	481	16,500	14.6
	0.25	484	9,300	9.0
