

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

Project Number: 01086

Test Date: May 21, 2001

Fan

Make: American Coolair

Model #: FGBR52L

Manufacturer: American Coolair

Blade Size: 53"

Orifice Dia.: 53.3"

Blade

Number: 4

Shape: propeller

Material: stainless steel

Pitch: -

Clearance: 0.2"

Shutter w/plastic bell mouth

Material: aluminum

of Doors: 14

of Columns: 1

Door Length: 54.6"

Location: intake

Other Attachments:

Discharge cone 27.1" deep, 53.3": i.d., 62" o.d.
belt tensioner

Motor

Make: AO Smith

Model #: 327P775

H.P.: 1

Amps: 11/5.5

Volts: 115/208-230

RPM: 1725

S.F.: 1.3

Drive

Drive Pulley Dia 2.6" o.d.

Axle Pulley Dia.: 9.8" o.d.

Housing

Material: fiberglass

Intake Area: 56" x 56"

Discharge Area: 53.3" dia.

Depth: 24" top
21.5" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR FGBR52L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01086	0.00	466	27,400	29.1
Fan description:	0.05	464	25,800	25.1
53" belt drive fan, 1 hp AO Smith 327P775	0.10	461	24,000	21.7
motor, fiberglass housing, aluminum bell mouth	0.15	458	21,500	18.4
shutter, guard and discharge cone	0.20	455	18,600	15.0
	0.25	453	9,900	7.5
