

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

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**Project Number:** 01115

**Test Date:** May 23, 2001

**Fan**

*Make:* American Coolair

*Model #:* MNCFC52L

*Manufacturer:* American Coolair

*Blade Size:* 52.8"

*Orifice Dia.:* 53.3"

**Blade**

*Number:* 6

*Shape:* propeller

*Material:* steel

*Pitch:* -

*Clearance:* 0.3"

**Shutter**

*Material:* plastic

*# of Doors:* 16 per column

*# of Columns:* 3

*Door Length:* 17.1"

*Location:* intake

**Other Attachments:**

belt tensioner

discharge cone 32.5" deep, 53.3" i.d., 63.5" o.d.

**Motor**

*Make:* AO Smith

*Model #:* 327P775

*H.P.:* 1

*Amps:* 11/5.5

*Volts:* 115/230

*RPM:* 1725

*S.F.:* 1.30

**Drive**

*Drive Pulley Dia.* 3.4" o.d.  
Browning AK34

*Axle Pulley Dia.:* 15.6" o.d.

**Housing**

*Material:* galvanized steel

*Intake Area:* 56.3" x 56.8"

*Discharge Area:* 53.3" dia.

*Depth:* 34.5" top  
25.3" bottom

**Guards**

*Description:* wire

*Spacing:* 2" concentric

*Location:* exhaust

## TEST RESULTS

### AMERICAN COOLAIR MNCFC52L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01115	0.00	374	26,200	23.0
Fan description:	0.05	373	24,300	20.4
53" belt drive, 1 hp AO Smith 327P775	0.10	371	22,100	17.9
motor, galvanized steel slant housing,	0.15	370	19,500	15.4
plastic shutter, guard and discharge cone	0.20	370	15,500	12.0
	0.25	370	10,900	8.5
	0.30	370	6,300	4.8

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