

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

Project Number: 99161

Test Date: September 21, 1999

Fan

Make: American Coolair

Motor

Make: Emerson

Model #: MNCFEC52L

Model #: T63ZZBBA-800

Manufacturer: American Coolair

H.P.: 1.0

Blade Size: 52.8"

Amps: 11.0/5.5

Orifice Dia.: 53.3"

Volts: 115/208-230

Blade

Number: 6

RPM: 1725

Shape: propeller

S.F.: 1.3

Material: painted steel

Drive

Drive Pulley Dia. AK30

Pitch: -

Axle Pulley Dia.: 15.5" o.d.

Clearance: 0.3"

Housing

Shutter

Material: galvanized steel

Material: aluminum

Intake Area: 56" x 57"

of Doors: 14 per column

Discharge Area: 55.4" x 54.3"

of Columns: 2

Depth: 30.4" top
21.5" bottom

Door Length: 26.7"

Guards

Location: intake

Description: wire

Other Attachments:

Discharge cone 32" deep, 53.3" i.d., 66.5" o.d.

Spacing: 2"

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNCFEC52L

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99161	0.00	339	24,000	27.0
Fan description:	0.05	338	22,400	24.3
52" belt drive fan, 1 hp Emerson T63ZZBBA-800	0.10	337	19,800	21.0
motor, galv. steel slant housing, aluminum	0.15	337	16,700	17.4
Shutter, guard and discharge cone	0.20	337	13,100	13.4
	0.25	336	5,300	5.2