

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

Project Number: 99162

Fan

Make: American Coolair

Model #: MNCFC52L

Manufacturer: American Coolair

Blade Size: 52.8"

Orifice Dia.: 53.3"

Blade

Number: 6

Shape: propeller

Material: painted steel

Pitch: -

Clearance: 0.3"

Shutter

Material: aluminum

of Doors: 14 per column

of Columns: 2

Door Length: 26.7"

Location: intake

Other Attachments:

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

Test Date: September 21, 1999

Motor

Make: Emerson

Model #: T63ZZBBA-800

H.P.: 1.0

Amps: 11.0/5.5

Volts: 115/208-230

RPM: 1725

S.F.: 1.3

Drive

Drive Pulley Dia. AK34

Axle Pulley Dia.: 15.5" o.d.

Housing

Material: galvanized steel

Intake Area: 56" x 57"

Discharge Area: 55.4" x 54.3"

Depth: 30.4" top
21.5" 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: 99162	0.00	364	25,700	23.7
Fan description:	0.05	364	24,200	21.6
52" belt drive fan, 1 hp Emerson T63ZZBBA-800	0.10	363	22,100	19.2
motor, galv. steel slant housing, aluminum	0.15	362	19,800	16.8
Shutter, guard and discharge cone	0.20	362	16,600	13.9
	0.25	362	12,900	10.6
	0.30	361	6,400	5.2
