

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

Project Number: 99163

Fan

Make: American Coolair

Model #: MNCFC52M1P

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 #: T63ZZCDZ-1257

Sample # M-79977

H.P.: 1.5

Amps: 13.2/6.7 - 15.5/7.8

Volts: 115/230

RPM: 1725/1425

S.F.: 1.3

Drive

Drive Pulley Dia. AK39

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 MNCFC52M1P

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 99163	0.00	407	28,600	19.8
Fan description:	0.05	407	27,300	18.4
52" belt drive fan, 1.5 hp Emerson T63ZZCDZ-1257	0.10	405	25,400	16.7
motor, galv. steel slant housing, aluminum	0.15	404	23,400	15.0
Shutter, guard and discharge cone	0.20	403	21,000	13.3
	0.25	403	18,000	11.3
	0.30	402	14,900	9.3
