

University of Illinois Department of
Agricultural Engineering
BEES Lab

Project Number: 01112

Test Date: May 23, 2001

Fan

Make: American Coolair

Model #: MNCFC52M

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: Emerson

Model #: T63ZZCDZ-1257

H.P.: 1.5

Amps: 13.2/6.7//15.5/7.8

Volts: 115/230

RPM: 1725/1425

S.F.: -

Drive

Drive Pulley Dia. 3.8" o.d.
Browning AK39

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 MNCFC52M

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01112	0.00	408	28,600	20.1
Fan description:	0.05	408	27,100	18.6
53" belt drive, 1.5 hp Emerson T63ZZCDZ-1257	0.10	407	25,000	16.6
motor, galvanized steel slant housing,	0.15	406	23,000	14.8
plastic shutter, guard and discharge cone	0.20	405	20,000	12.7
	0.25	404	16,500	10.3
	0.30	405	11,900	7.6
