

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

---

**Project Number:** 01207

**Test Date:** August 22, 2001

**Fan**

*Make:* American Coolair

*Model #:* MNEF52M

*Manufacturer:* American Coolair

*Blade Size:* 53"

*Orifice Dia.:* 53.4"

**Blade**

*Number:* 4

*Shape:* propeller

*Material:* galvanized steel

*Pitch:* -

*Clearance:* 0.2"

**Shutter w/ bell mouth inlet**

*Material:* plastic

*# of Doors:* 16

*# of Columns:* 3

*Door Length:* 17.1"

*Location:* intake

**Other Attachments:**

Belt tensioner

**Motor**

*Make:* Emerson

*Model #:* T63ZZCDZ-1257

*H.P.:* 1.5

*Amps:* 13.2/6.7

*Volts:* 115/230

*RPM:* 1725

*S.F.:* -

**Drive**

*Drive Pulley Dia.* 2.8"  
AK28

*Axle Pulley Dia.:* 9.5"

**Housing**

*Material:* galvanized steel

*Intake Area:* 56" x 57"

*Discharge Area:* 53.4" dia.

*Depth:* 30.3" top  
21.3" bottom

**Guards**

*Description:* wire

*Spacing:* 2" x 2"

*Location:* exhaust

# TEST RESULTS

## AMERICAN COOLAIR MNEF52M

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 01207	0.00	501	25,500	19.8
Fan description:	0.05	500	24,100	18.0
53" belt drive, 1.5 hp Emerson T63ZZCDZ-1257	0.10	498	22,800	16.6
motor, galvanized steel slant housing,	0.15	497	20,900	14.9
plastic bell mouth shutter and guard	0.20	496	19,000	13.2
	0.25	495	16,600	11.3
	0.30	493	13,600	9.1

---