

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

---

**Project Number:** 98251

**Test Date:** November 12, 1998

**Fan**

*Make:* Schaefer

*Model #:* FM4800-1G

*Manufacturer:* Schaefer

*Blade Size:* 48"

*Orifice Dia.:* 48.5"

**Blade**

*Number:* 3

*Shape:* propeller

*Material:* galvanized steel

*Pitch:* -

*Clearance:* 0.3"

**Shutter**

*Material:* aluminum

*# of Doors:* 14 per column

*# of Columns:* 2

*Door Length:* 26.8"

*Location:* intake

**Other Attachments:**

**Motor**

*Make:* Magnetek

*Model #:* C782

*H.P.:* 1

*Amps:* 4.3/8.6

*Volts:* 230/115

*RPM:* 1725

*S.F.:* 1.4

**Drive**

*Drive Pulley Dia.* 3" o.d.

*Axle Pulley Dia.:* 10" o.d.

**Housing**

*Material:* fiberglass

*Intake Area:* 54.5" x 55"

*Discharge Area:* 48.4" dia.

*Depth:* 33" top  
29.5" bottom

**Guards**

*Description:* wire

*Spacing:* 1.5" concentric

*Location:* exhaust

TEST RESULTS

SCHAEFER FM4800-1G

|                                             | Static Pressure  | Speed      | Airflow    | Efficiency      |
|---------------------------------------------|------------------|------------|------------|-----------------|
|                                             | <u>in. water</u> | <u>rpm</u> | <u>cfm</u> | <u>cfm/Watt</u> |
| Test: 98251                                 | 0.00             | 499        | 19100      | 22.0            |
| Fan description:                            | 0.05             | 500        | 17800      | 19.9            |
| 48" belt drive, 1 hp Magnetek C782          | 0.10             | 499        | 16400      | 17.9            |
| motor, fiberglass housing, aluminum shutter | 0.15             | 498        | 14800      | 15.9            |
| and guard                                   | 0.20             | 498        | 12300      | 13.0            |
|                                             | 0.25             | 497        | 9300       | 9.3             |
|                                             | 0.30             | 494        | 6700       | 6.1             |

---