

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

---

**Project Number:** 98177

**Test Date:** September 30, 1998

**Fan**

*Make:* Acme

*Model #:* DDPS361G8-C

*Manufacturer:* Acme Eng. & Mfg.

*Blade Size:* 36"

*Orifice Dia.:* 36.8"

**Blade**

*Number:* 4

*Shape:* propeller

*Material:* Stainless steel

*Pitch:* -

*Clearance:* 0.4"

**Shutter**

*Material:* aluminum

*# of Doors:* 11 per row

*# of Columns:* 2

*Door Length:* 20.5"

*Location:* intake

**Other Attachments:**

discharge cone 25.8" deep, 36.8" i.d., 48" o.d.

**Motor**

*Make:* Emerson

*Model #:* K55HXLLW-3792

*H.P.:* 1/2

*Amps:* 6.14/3.2

*Volts:* 115/230

*RPM:* 825

*S.F.:* 1.0

**Drive**

*Drive Pulley Dia.* direct

*Axle Pulley Dia.:* drive

**Housing**

*Material:* fiberglass

*Intake Area:* 42.8"x45.8"

*Discharge Area:* 36.8" dia.

*Depth:* 26" top  
14.5" bottom

**Guards**

*Description:* wire

*Spacing:* 2.1" concentric

*Location:* exhaust

TEST RESULTS

ACME DDPS361G8-C

|                                              | Static Pressure  | Speed      | Airflow    | Efficiency      |
|----------------------------------------------|------------------|------------|------------|-----------------|
|                                              | <u>in. water</u> | <u>rpm</u> | <u>cfm</u> | <u>cfm/Watt</u> |
| Test: 98177                                  | 0.00             | 864        | 11540      | 23.9            |
| Fan description:                             | 0.05             | 861        | 10780      | 21.0            |
| 36" Direct drive ½ hp Emerson K55HXLLW-3792  | 0.10             | 855        | 9990       | 18.5            |
| motor, figerglass housing, aluminum shutter, | 0.15             | 852        | 9340       | 16.4            |
| guard and discharge cone                     | 0.20             | 843        | 7750       | 12.5            |
|                                              | 0.25             | 838        | 5250       | 8.2             |
|                                              | 0.30             | 823        | 4000       | 5.5             |

---