

University of Illinois Department of  
Agricultural Engineering  
BESS Lab

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**Project Number:** 03002

**Fan**

*Make:* Chore-Time

*Model #:* 48483-22

*Manufacturer:* CTB, Inc.

*Blade Size:* 51.8" dia.

*Orifice Dia.:* 52.8"

**Blade - 106**

*Number:* 3

*Shape:* propeller

*Material:* galvanized steel

*Pitch:* -

*Clearance:* 0.5"

**Shutter Butterfly damper**

*Material:* Galvanized steel

*# of Doors:* 2

*# of Columns:* na

*Door Length:* na

*Location:* exhaust

**Other Attachments:**

Discharge cone 35" deep, 52.8" i.d., 64" o.d.

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**Test Date:** January 14, 2003

**Motor**

*Make:* AO Smith

*Model #:* K56A77C58

*H.P.:* 1.5

*Amps:* 13.8/6.9

*Volts:* 115/230

*RPM:* 1725/1425

*S.F.:* 1.1

**Drive**

*Drive Pulley Dia.* 3.0" o.d.  
AK30

*Axle Pulley Dia.:* 9.3" o.d.  
AK94

**Housing**

*Material:* galvanized steel housing

*Intake Area:* 55.5" x 55.5"

*Discharge Area:* 52.8" dia.

*Depth:* 10.5"

**Guards**

*Description:* wire

*Spacing:* 2" x 4" (intake)  
2" concentric (exhaust)

*Location:* intake/exhaust

TEST RESULTS

CHORE-TIME 48483-22	Static Pressure	Speed	Airflow	Efficiency
Test: 03002	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
	0.00	563	28,000	27.5
Fan description:	0.05	561	26,200	24.0
52" belt drive, 1.5 hp AO Smith K56A77C58	0.10	559	24,400	21.0
motor, galvanized steel housing, galvanized	0.15	558	22,300	18.2
steel butterfly damper, guard and discharge cone	0.20	556	20,200	15.8
	0.25	555	17,800	13.4
	0.30	554	14,400	10.6