

University of Illinois Department of
Agricultural Engineering
BESS Lab

Project Number: 03003

Test Date: January 14, 2003

Fan

Make: Chore-Time

Model #: 48483-42

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.

Motor

Make: GE

Model #: 5K49TN435

H.P.: 1.5

Amps: 4.8-4.6/2.3

Volts: 208-230/460

RPM: 1725

S.F.: 1.4

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 48483-42	Static Pressure	Speed	Airflow	Efficiency
Test: 03003	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
▲3 phase	0.00	565	28,000	27.7
Fan description:	0.05	564	26,400	24.8
52" belt drive, 1.5 hp GE 5K49TN435	0.10	562	24,600	21.3
motor, galvanized steel housing, galvanized	0.15	561	22,600	18.7
steel butterfly damper, guard and discharge cone	0.20	560	20,400	16.1
	0.25	559	18,100	13.9
	0.30	559	15,000	11.2