

University of Illinois Department of
Agricultural Engineering
BESS Lab

Project Number: 98012P

Test Date: January 16, 1998

Fan

Make: ProTerra

Model #: A40452-2422

Manufacturer: Chore-Time

Blade Size: 24"

Orifice Dia.: 24.3"

Blade

Number: 4

Shape: propeller

Material: cast aluminum

Pitch: -

Clearance: 0.2"

Shutter

Material: plastic

of Doors: 7

of Columns: 1

Door Length: 26.4"

Location: intake

Other Attachments:

Discharge cone 21" deep, 31.4" o.d., 24.3" i.d.

Motor

Make: GE

Model #: 5KCP39SG

H.P.: 1/3

Amps: 2.00

Volts: 230

RPM: 1075

S.F.: -

Drive

Drive Pulley Dia.: direct

Axle Pulley Dia.: drive

Housing

Material: fiberglass

Intake Area: 28.1" x 28.1"

Discharge Area: 24.3" dia.

Depth: 20" top
19" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

ProTerra A40452-2422	Static Pressure	Speed	Airflow	Efficiency
Test: 98012P	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
	0.00	1102	6400	17.8
Fan description:	0.05	1096	5990	16.2
24" direct drive, 1/3 hp GE 5KCP39SG	0.10	1093	5550	15.0
motor, fiberglass housing, plastic shutter,	0.15	1089	5060	13.2
guard and discharge cone	0.20	1089	4370	11.6
	0.25	1089	2510	6.7
	0.30	1073	1800	4.4