

University of Illinois Department of
Agricultural Engineering
BEES Lab

Project Number: 03048bd

Test Date: April 29, 2003

Fan

Make: Big Dutchman

Model #: 60-36-5203 w/cone

Manufacturer: Canarm

Blade Size: 35.9"

Orifice Dia.: 36.8"

Blade

Number: 4

Shape: propeller

Material: galvanized steel

Pitch: -

Clearance: 36.8"

Shutter

Material: plastic

of Doors: 12 per column

of Columns: 2

Door Length: 20"

Location: intake

Other Attachments:

Discharge cone 19.5" deep, 40.3" i.d., 44.5" o.d.

Motor

Make: Marathon

Model #: 9WD56S17T600E

H.P.: 1/2

Amps: 6.6/3.3

Volts: 115/230

RPM: 1725

S.F.: 1.25

Drive

Drive Pulley Dia. 3.3" o.d.

Axle Pulley Dia.: 10.0" o.d.

Housing

Material: fiberglass

Intake Area: 42" x 41"

Discharge Area: 40.3" dia.

Depth: 36" top
26" bottom

Guards

Description: wire

Spacing: 2"

Location: exhaust

TEST RESULTS

BIG DUTCHMAN 60-36-5203 w/cone

Test: 03048bd

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
	0.00	540	11,220	22.5
Fan description:	0.05	540	10,030	18.5
36" belt drive, ½ hp Marathon 9WD56S17T600E	0.10	536	8,790	15.2
motor, fiberglass housing, plastic shutter, guard	0.15	534	7,210	12.0
and discharge cone	0.20	533	3,820	6.2
	0.25	527	2,610	3.7
	0.30	522	1500	1.9