

University of Illinois Department of
Agricultural Engineering
BEES Lab

Project Number: 02015bd

Test Date: Janaury 8, 2002

Fan

Make: Big Dutchman

Model #: 60-50-5201

Manufacturer: Canarm

Blade Size: 50" dia.

Orifice Dia.: 51"

Blade

Number: 3

Shape: propeller

Material: cast aluminum

Pitch: -

Clearance: 0.5"

Shutter

Material: Plastic

of Doors: 16 per column

of Columns: 3

Door Length: 18"

Location: intake

Other Attachments:

Motor

Make: Marathon

Model #: 8VH56T17T5549E P

H.P.: 1

Amps: 4.6/2.3

Volts: 208-230/460 3 phase

RPM: 1725

S.F.: 1.0

Drive

Drive Pulley Dia. 3.5" o.d.

Axle Pulley Dia.: 10" o.d.

Housing

Material: fiberglass

Intake Area: 54" x 54.7"

Discharge Area: 51" dia.

Depth: 44" top
31" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

Test Results

BIG DUTCHMAN 60-50-5201

Test: 02015bd

- 3 phase

Fan description:

50" belt drive, 1 hp Marathon 8VH56T17T5549E
motor, fiberglass housing, plastic shutter and guard

Static Pressure	Speed	Airflow	Efficiency
<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
0.00	584	25,500	20.7
0.05	583	24,000	18.6
0.10	581	22,300	16.5
0.15	580	20,500	14.6
0.20	578	18,300	12.6
0.25	578	13,400	9.2
0.30	574	10,500	6.6