

University of Illinois Department of
Agricultural Engineering
BEES Lab

Project Number: 02071bd

Test Date: February 12, 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:

Discharge cone 22.5" deep, 51" i.d., 60" o.d.

Motor

Make: Marathon

Model #: 8VM56T17T5549E 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: 02071bd

- 3 phase

Fan description:

50" belt drive, 1 hp Marathon 8VM56T17T5549E
motor, fiberglass housing, plastic shutter, guard
and discharge cone

Static Pressure
in. water

Speed
rpm

Airflow
cfm

Efficiency
cfm/Watt

0.00

584

27,200

23.0

0.05

582

25,300

20.2

0.10

580

23,500

17.7

0.15

578

21,500

15.4

0.20

576

19,100

13.0

0.25

574

14,900

10.0

0.30

571

9,900

6.3