

University of Illinois Department of
Agricultural Engineering
BEES Lab

Project Number: 03047bd

Test Date: April 29, 2003

Fan

Make: Big Dutchman

Model #: 60-36-5205 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 #: AWA56T17T5600A

H.P.: 1/2

Amps: 2.0-1.8/0.9 60Hz
1.8-2.0/9-1.0 50 Hz

Volts: 208-230/460 60 Hz
190-240/380-480 50 Hz

RPM: 1725/1425

S.F.: 1.00

Drive

Drive Pulley Dia. 3.5" o.d.

Axle Pulley Dia.: 9.0" 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 60-36-5205 w/cone

Test: 03047bd

▲ 3 phase, 380V, 50Hz

Fan description:

36" belt drive, ½ hp Marathon AWA56T17T5600A

motor, fiberglass housing, plastic shutter,

guard and discharge cone

Static Pressure
in. water

Speed
rpm

Airflow
cfm

Efficiency
cfm/Watt

0.00

546

11,380

26.5

0.05

543

10,250

22.2

0.10

541

8,990

18.3

0.15

540

7,530

14.7

0.20

538

3,880

7.4

0.25

533

2,750

4.7

0.30

528

1,720

2.7