

University of Illinois Department of
Agricultural Engineering
BEES Lab

Project Number: 00072bd

Test Date: April 26, 2000

Fan

Make: Big Dutchman

Model #: 60-50-5203

Manufacturer: Canarm

Blade Size: 50.1 dia.

Orifice Dia.: 51" dia.

Blade

Number: 3

Shape: propeller

Material: galvanized steel

Pitch: -

Clearance: 0.5"

Shutter

Material: plastic w/ galv. Frame

of Doors: 14 per column

of Columns: 2

Door Length: 27.5"

Location: intake

Other Attachments:

Motor

Make: GE

Model #: 5KCR48WN0513X

H.P.: 1.0

Amps: 9.6/4.8

Volts: 115/230

RPM: 1725

S.F.: 1.40

Drive

Drive Pulley Dia. 3.5" o.d.

Axle Pulley Dia.: 9.9" o.d.

Housing

Material: fiberglass

Intake Area: 56.3" x 56"

Discharge Area: 54" dia.

Depth: 43.3" x 31"

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

Test Results

BIG DUTCHMAN 60-50-5203

Test: 00072bd

Fan description:

50" belt drive, 1 hp GE 5KCR48WN0513X
motor, fiberglass housing, plastic shutter and guard

Static Pressure

in. water

0.00

0.05

0.10

0.15

0.20

0.25

0.30

Speed

rpm

606

605

602

600

598

595

593

Airflow

cfm

25,900

24,400

22,800

21,100

19,200

16,800

13,300

Efficiency

cfm/Watt

22.5

20.0

17.7

15.7

13.7

11.7

8.9