

University of Illinois Department of
Agricultural Engineering
BESS Lab

Project Number: 02011bd

Test Date: Janaury 8, 2002

Fan

Make: Big Dutchman

Model #: 60-50-5200

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: GE

Model #: 5KCR48WN0513AX

H.P.: 1

Amps: 9.6/4.8

Volts: 115/230

RPM: 1725

S.F.: 1.4

Drive

Drive Pulley Dia. 3.0"

Axle Pulley Dia.: 8.9"

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 60-50-5200

Test: 02011bd

Fan description:

50" belt drive, 1 hp GE 5KCR48WN0513AX
motor, fiberglass housing, plastic shutter, guard
and discharge cone

Static Pressure

in. water

0.00

0.05

0.10

0.15

0.20

0.25

0.30

Speed

rpm

559

558

556

553

552

550

545

Airflow

cfm

25,600

23,900

22,000

20,000

17,300

11,300

8,800

Efficiency

cfm/Watt

25.1

22.1

19.4

16.6

13.8

8.6

5.9