

University of Illinois Department of
Agricultural Engineering
BESS Lab

Project Number: 02012bd

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:

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: 02012bd

Fan description:

50" belt drive, 1 hp GE 5KCR48WN0513AX
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

557

556

554

552

551

550

544

Airflow

cfm

24,200

22,700

21,000

19,000

16,100

11,600

8,600

Efficiency

cfm/Watt

22.8

20.3

17.8

15.4

12.6

8.8

5.7