

University of Illinois Department of
Agricultural Engineering
BESS Lab

Project Number: 02330bd

Test Date: September 5, 2002

Fan

Make: Big Dutchman

Model #: 60-48-5000

Manufacturer: Canarm

Blade Size: 48.3"

Orifice Dia.: 48.9"

Blade

Number: 3

Shape: propeller

Material: galvanized steel

Pitch: -

Clearance: 0.3"

Shutter

Material: plastic

of Doors: 16 per column

of Columns: 3

Door Length: 17.2"

Location: intake

Other Attachments:

Discharge cone 29" deep, 48.9" i.d., 58" o.d.

Motor

Make: GE

Model #: 5KCR48WN0513AX

H.P.: 1

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.: 10" o.d.

Housing

Material: galvanized steel

Intake Area: 51.5" x 51.5"

Discharge Area: 48.9" dia.

Depth: 31" top
19.5" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

Test Results

BIG DUTCHMAN 60-48-5000

Test: 02330bd

Fan description:

48" belt drive, 1 hp GE 5KCR48WN0513AX motor,
galvanized steel slant 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

589

588

587

586

584

583

583

Airflow

cfm

25,500

24,000

22,400

20,300

18,100

14,400

9,500

Efficiency

cfm/Watt

22.8

20.3

18.3

15.9

13.8

10.7

7.0