

University of Illinois Department of
Agricultural Engineering
BEES Lab

Project Number: 03043bd

Fan

Make: Big Dutchman
Model #: 60-50-5202 w/cone
Manufacturer: Canarm
Blade Size: 50"
Orifice Dia.: 50.8"

Blade

Number: 50"
Shape: 3
Material: cast aluminum
Pitch: -
Clearance: 0.4"

Shutter

Material: plastic
of Doors: 16 per column
of Columns: 3
Door Length: 18"
Location: intake

Other Attachments:

Discharge cone 28" deep, 55" i.d., 61.5" o.d.

Test Date: 4/29/03

Motor

Make: GE
Model #: 5K49PN4354
H.P.: 1
Amps: 3.9-3.5/2.2-2.0
Volts: 220-230/380-/415
RPM: '1725/1425
S.F.: 1.00

Drive

Drive Pulley Dia. 3.8" o.d.
Axle Pulley Dia.: 9" o.d.

Housing

Material: fiberglass
Intake Area: 54" x52.3"
Discharge Area: 55" dia.
Depth: 44" top
31" bottom

Guards

Description: wire
Spacing: 2"
Location: exhaust

TEST RESULTS

BIG DUTCHMAN 60-50-5202 w/cone

Test: 03043bd

▲ 3 phase, 380V, 50Hz

Fan description:

50" belt drive, 1 hp GE 5K49PN4354 motor,
fiberglass housing, plastic shutter, guard
and discharge cone

Static Pressure
in. water

Speed
rpm

Airflow
cfm

Efficiency
cfm/Watt

0.00

570

25,200

23.4

0.05

568

23,500

21.1

0.10

566

21,800

18.9

0.15

564

19,900

16.9

0.20

563

17,700

14.6

0.25

562

15,000

12.2

0.30

562

9,200

7.5