

University of Illinois Department of
Agricultural Engineering
BEES Lab

Project Number: 04038

Test Date: February 16, 2004

Fan

Make: J & D

Model #: VFA50AC

Manufacturer: J & D Mfg..

Blade Size: 50" o.d.

Orifice Dia.: 51.3"

Blade

Number: 3

Shape: propeller

Material: cast aluminum

Pitch: -

Clearance: 0.7"

Shutter

Material: aluminum

of Doors: 14 per column

of Columns: 2

Door Length: 26.5"

Location: intake

Other Attachments:

Discharge cone 23.8" deep, 51.3" i.d., 59" o.d.

Motor

Make: GE

Model #: 5KCR48WN0674X

Phase: 1

H.P.: 1

Amps: 9.6/4.8

Volts: 115/230

RPM: 1725

S.F.: 1.4

Drive

Drive Pulley Dia. 3.2" o.d.
AK32

Axle Pulley Dia.: 10" o.d.

Housing

Material: fiberglass

Intake Area: 52.5" x 52.5"

Discharge Area: 51.3" dia.

Depth: 32.5" top
27.3" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

J & D VFA50AC

Test: 04038

Fan description:

50" belt drive, 1 hp GE 5KCR48WN0674X
motor, fiberglass housing, aluminum shutter,
guard and discharge cone

Static Pressure
in. water

Speed
rpm

Airflow
cfm

Efficiency
cfm/Watt

0.00

557

24,100

22.8

0.05

556

22,200

20.1

0.10

555

20,800

18.4

0.15

555

19,200

16.6

0.20

554

17,100

14.5

0.25

554

13,700

11.9

0.30

554

9,600

8.2