

University of Illinois Department of
Agricultural Engineering
BEES Lab

Project Number: 04163

Test Date: June 17, 2004

Fan

Make: Schaefer

Model #: 423SC34

Manufacturer: Schaefer

Blade Size: 41.7"

Orifice Dia.: 42.4"

Blade

Number: 3

Shape: propeller

Material: galvanized steel

Pitch: -

Clearance: 0.4"

Shutter

Material: aluminum

of Doors: 12 per column

of Columns: 2

Door Length: 23.7"

Location: intake

Other Attachments:

discharge cone 22.8" deep, 42.4" i.d., 53" o.d.

Motor

Make: AO Smith

Model #: CS421

Phase: 1

H.P.: 3/4

Amps: 3.9/7.8

Volts: 230/115

RPM: 1725

S.F.: 1.25

Drive

Drive Pulley Dia. 3.3" o.d.

Axle Pulley Dia.: 9.3" o.d.
AK94

Housing

Material: galvanized steel

Intake Area: 46.7" x 47"

Discharge Area: 42.4" dia.

Depth: 32.5" top
24" bottom

Guards

Description: wire

Spacing: 1.8" concentric

Location: exhaust

TEST RESULTS

SCHAEFER 423SC34

Test: 04163

Fan description:

42" belt drive, ¾ hp AO Smith CS421 motor,
galvanized steel slant housing, aluminum shutter,
discharge cone and guard.

Static Pressure
in. water

Speed
rpm

Airflow
cfm

Efficiency
cfm/Watt

0.00

616

17,300

19.7

0.05

615

15,900

17.3

0.10

614

14,400

15.2

0.15

613

13,000

13.1

0.20

612

10,900

10.7

0.25

611

8,300

7.9

0.30

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