

University of Illinois Department of
Agricultural and Biological Engineering
BEES Lab

Project Number: 05122

Test Date: April 19, 2005

Fan

Make: Valco

Model #: HGS54G340NGA

Manufacturer: Valco

Blade Size: 54"

Orifice Dia.: 55"

Blade

Number: 3

Shape: propeller

Material: galvanized steel

Pitch: -

Clearance: 0.5"

Shutter

Material: aluminum

of Doors: 15 per column

of Columns: 2

Door Length: 29.8"

Location: intake

Other Attachments:

discharge cone 27" deep, 55" i.d., 68.8" o.d.

Motor

Make: Raydot

Model #: K56B06D27

Phase: 1

H.P.: 1.0

Amps: 9.6/4.8

Volts: 115/230

RPM: 1725/1425

S.F.: 1.40

Drive

Drive Pulley Dia. 3.3" o.d.

Axle Pulley Dia.: 12" o.d.

Housing

Material: galvanized steel

Intake Area: 57.9" x 57.9"

Discharge Area: 55" dia.

Depth: 25.8" top
16" bottom

Guards

Description: wire

Spacing: 2.3" concentric

Location: exhaust

TEST RESULTS

VAL-CO HGS54G340N_A (G OR S)

Test: 05122

Fan description:

54" belt drive, 1 hp Raydot K56B06D27 motor,
galvanized steel slant housing,
aluminum shutter, guard and discharge cone

Static Pressure

in. water

0.00

0.05

0.10

0.15

0.20

0.25

Speed

rpm

469

468

467

465

464

463

Airflow

cfm

28,200

26,500

24,200

21,600

18,600

10,700

Efficiency

cfm/Watt

29.6

26.0

22.7

19.2

15.6

8.7