

University of Illinois Department of
Agricultural and Biological Engineering
BESS Lab

Project Number: 05123

Test Date: April 19, 2005

Fan

Make: Valco

Model #: HGS54G420LGA

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: GE

Model #: 5KCR48WN0608X

Phase: 1

H.P.: 1.5

Amps: 15.0/7.5

Volts: 115/230

RPM: 1725

S.F.: 1.00

Drive

Drive Pulley Dia. 3.3" o.d.

Axle Pulley Dia.: 10.3" 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 HGS54G420L_A (G or S)

Test: 05123

Fan description:

54" belt drive, 1.5 hp GE 5KCR48WN0608X

motor, galvanized steel slant housing,

aluminum shutter, guard and discharge cone

Static Pressure

in. water

0.00

0.06

0.10

0.15

0.20

0.25

0.30

Speed

rpm

-

540

539

537

536

534

532

Airflow

cfm

-

30,600

29,000

27,200

25,000

22,200

19,000

Efficiency

cfm/Watt

-

19.6

17.9

16.1

14.2

12.1

10.0