

University of Illinois Department of
Agricultural and Biological Engineering
BESS Lab

Project Number: 05121

Test Date: April 19, 2005

Fan

Make: Valco

Model #: HGS54G340MGA

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" 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 HGS54G340M_A (G or S)	Static Pressure	Speed	Airflow	Efficiency
Test: 05121	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
	0.00	500	30,200	26.0
Fan description:	0.05	499	28,400	23.3
54" belt drive, 1 hp Raydot K56B06D27	0.10	497	26,500	20.6
motor, galvanized steel slant housing,	0.15	496	24,200	18.0
aluminum shutter, guard and discharge cone	0.20	494	21,500	15.2
	0.25	492	18,400	12.4
	0.30	490	10,900	7.1