

University of Illinois Department of
Agricultural and Biological Engineering
BEES Lab

Project Number: 05202

Test Date: June 15, 2005

Fan

Make: Val-Co

Model #: HGS48G420L_A (N or C)

Manufacturer: Val-Co

Blade Size: 48.2"

Orifice Dia.: 48.6"

Blade

Number: 3

Shape: propeller

Material: cast aluminum

Pitch: -

Clearance: 0.2"

Shutter

Material: aluminum

of Doors: 14 per column

of Columns: 2

Door Length: 26.8"

Location: intake

Other Attachments:

Discharge cone 34.4" deep, 48.6" i.d., 60" 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.: 9.3" o.d.

Housing

Material: galvanized steel

Intake Area: 52.6" x 53"

Discharge Area: 48.6" dia.

Depth: 27.5" top

Guards

Description: wire

Spacing: 2"

Location: exhaust

TEST RESULTS

VAL-CO HGS48G420L_A (N or C)	Static Pressure	Speed	Airflow	Efficiency
Test: 05202	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
	0.00	608	26,600	21.5
Fan description:	0.05	607	25,200	19.8
48" belt drive, 1.5 hp GE 5KCR48WN0608X motor,	0.10	606	23,900	18.0
galvanized steel slant housing, aluminum shutter,	0.15	605	22,400	16.4
discharge cone and guard	0.20	603	20,800	14.8
	0.25	603	18,900	13.2
	0.30	602	16,900	11.7