

University of Illinois Department of  
Agricultural Engineering  
BESS Lab

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**Project Number** :02204bd

**Test Date:** June 19, 2002

**Fan**

*Make:* Big Dutchman

*Model #:* 60-48-5001

*Manufacturer:* Canarm

*Blade Size:* 48.3"

*Orifice Dia.:* 49"

**Blade**

*Number:* 3

*Shape:* propeller

*Material:* galvanized steel

*Pitch:* -

*Clearance:* 0.4"

**Shutter**

*Material:* plastic w/ s.s. frame

*# of Doors:* 16 per column

*# of Columns:* 3

*Door Length:* 17.2"

*Location:* intake

**Other Attachments:**

Discharge cone 29" deep, 49" i.d., 60" o.d.

**Motor**

*Make:* Marathon

*Model #:* 8VM56T17T5549E

*H.P.:* 1

*Amps:* 4.6/2.3

*Volts:* 208-230/460 3 phase

*RPM:* 1715

*S.F.:* 1.00

**Drive**

*Drive Pulley Dia.* 3.5" o.d.

*Axle Pulley Dia.:* 10" o.d.

**Housing**

*Material:* galvanized steel

*Intake Area:* 51.5" x 51.7"

*Discharge Area:* 49" dia.

*Depth:* 27" top  
15" bottom

**Guards**

*Description:* wire

*Spacing:* 2" concentric

*Location:* exhaust

## Test Results

### BIG DUTCHMAN 60-48-5001

Test: 02204bd

- 3 phase

Fan description:

48" belt drive, 1 hp Marathon 8VM56T17T5549E motor,  
galvanized steel slant housing, plastic shutter, guard  
and discharge cone

Static Pressure	Speed	Airflow	Efficiency
<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
0.00	586	24,200	23.6
0.05	585	22,700	21.0
0.10	584	21,000	18.8
0.15	582	19,100	16.5
0.20	581	16,600	13.8
0.25	580	12,900	10.4
0.30	579	7,500	6.1

