

## Bioenvironmental and Structural Systems Lab

### Fan Description Form

Project Number: 96276 Series/Test:     /    

Test Date: October 22, 1996 File Name: \_\_\_\_\_

## Fan

Make: Canarm

Model #: PBF20 w/slant kit  
1/3 hp

Serial #: -

Manufacturer: Canarm

Blade Size: 20" dia.

Orifice Dia.: 20.6"

## Blade

Number: 3

Shape: propeller

Material: polypropylene

Pitch: 43 degree

Clearance: 0.3"

Hub Diameter: -

## Shutter

Material: plastic

Number Doors: 6

Number Rows: 1

Door Length: 24.3"

Location: intake

## Other Attachments

## Motor

Make: Marathon

Model #: 3WC48A17T272AP

Serial #: -

H.P.: 1/3

Amps: 3.8/1.9

Volts: 115/230

RPM: 1625

S.F.: 1.0

Drive Pulley Dia.: direct

Axle Pulley Dia.: drive

Center Spacing: -

## Housing

Material: plastic/ss

Intake Area: 23.6"x23.2"

Discharge Area: 23" dia.

Depth:  $\frac{30.5'' \text{ top}}{26'' \text{ bottom}}$

## Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

CANARM PBF20 1/3 hp w/slant kit

|                                     | Static Pressure  | Speed      | Airflow    | Efficiency      |
|-------------------------------------|------------------|------------|------------|-----------------|
|                                     | <u>in. water</u> | <u>rpm</u> | <u>cfm</u> | <u>cfm/Watt</u> |
| Test: 96276                         | 0.00             | 1664       | 4730       | 12.3            |
| Fan description:                    | 0.05             | 1662       | 4500       | 11.8            |
| 20" direct drive, 1/3 hp Marathon   | 0.10             | 1659       | 4280       | 11.1            |
| 3WC48A17T272AP motor, plastic slant | 0.15             | 1660       | 4010       | 10.3            |
| housing, plastic shutter and guard  | 0.20             | 1662       | 3730       | 9.8             |
|                                     | 0.25             | 1664       | 3430       | 9.1             |
|                                     | 0.30             | 1668       | 2810       | 7.7             |