

University of Illinois Department of
Agricultural Engineering
BESS Lab

Project Number: 99190

Fan

Make: American Coolair

Model #: MNBFC48M3P

Manufacturer: American Coolair

Blade Size: 49.0" dia.

Orifice Dia.: 49.4"

Blade

Number: 6

Shape: propeller

Material: painted steel

Pitch: -

Clearance: 0.2"

Shutter

Material: aluminum

of Doors: 17 per column

of Columns: 2

Door Length: 25.3"

Location: intake

Other Attachments:

Discharge cone 28.5" deep, 49.4" i.d., 61" o.d.

Test Date: September 24, 1999

Motor

Make: Baldor

Model #: EM3554T

H.P.: 1.5

Amps: 4.2/2.1

Volts: 230/460 3 phase

RPM: 1750

S.F.: 1.15

Drive

Drive Pulley Dia. 4.3" o.d.
AK44

Axle Pulley Dia.: 16" o.d.

Housing

Material: galvanized steel

Intake Area: 51.5" x 52.5"

Discharge Area: 54.5" x 54.5"

Depth: 30.4" top
21.5" bottom

Guards

Description: wire

Spacing: 2" concentric

Location: exhaust

TEST RESULTS

AMERICAN COOLAIR MNBFC48M3P

Test: 99190 3 phase

3 phase

Fan description:

49" belt drive, 1.5 hp Baldor EM3554T
motor, galv. steel slant housing, aluminum
Shutter, guard and discharge cone

Static Pressure

in. water

0.00

0.05

0.10

0.15

0.20

0.25

0.30

Speed

rpm

467

467

467

466

466

465

464

Airflow

cfm

25,900

25,200

24,300

22,800

21,200

19,500

16,700

Efficiency

cfm/Watt

18.3

17.3

16.4

15.0

13.6

12.4

10.5