

**University of Illinois Department of  
Agricultural Engineering  
BESS Lab**

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**Project Number:** 98209

**Test Date:** October 20, 1998

**Fan**

*Make:* Hired Hand

*Model #:* 6603-6132

*Manufacturer:* Hired Hand

*Blade Size:* 17.5"

*Orifice Dia.:* 18.1"

**Blade**

*Number:* 3

*Shape:* propeller

*Material:* aluminum

*Pitch:* -

*Clearance:* 0.3"

**Shutter**

*Material:* Plastic

*# of Doors:* 6

*# of Columns:* 1

*Door Length:* 19.8"

*Location:* intake

**Other Attachments:**

**Motor**

*Make:* Magnetek

*Model #:* HF2J070N

*H.P.:* 1/4

*Amps:* 3.4/1.7

*Volts:* 115/230

*RPM:* 1725

*S.F.:* 1.0

**Drive**

*Drive Pulley Dia.* Direct

*Axle Pulley Dia.:* drive

**Housing**

*Material:* plastic

*Intake Area:* 21.3"x21.6"

*Discharge Area:* 18.1" dia.

*Depth:* 21.5" top  
20.5" bottom

**Guards**

*Description:* wire

*Spacing:* 1.4" concentric

*Location:* exhaust

TEST RESULTS

HIRED HAND 6603-6132

	Static Pressure	Speed	Airflow	Efficiency
	<u>in. water</u>	<u>rpm</u>	<u>cfm</u>	<u>cfm/Watt</u>
Test: 98209	0.00	1661	3850	8.2
Fan description:	0.05	1655	3750	7.9
18" direct drive, 1/4 hp Magnetek HF2J070N	0.10	1651	3620	7.5
motor, plastic housing, plastic shutter	0.15	1646	3510	7.1
and guard	0.20	1642	3380	6.7
	0.25	1636	3250	6.4
	0.30	1630	3090	5.9